I haue read ouer this Booke, and I doe approue that it ſhould be Printed,

PETER DV MOVLIN.

Art.
8° M. 14.
BS.

I haue read ouer this Booke, and I doe approue that it ſhould be Printed,

PETER DV MOVLIN.

Art.
8° M. 14.
BS.

# THE ELEMENTS OF LOGICK

By

PETER DV MOVLIN.

Tranſlated out of the *French* Copie by

NATHANAEL DE-LAVYNI, Bachelour of Arts in *Cambridge*.

With the Authors approbation.

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BIBLIOTHECA BODLEIANA

TO
THE RIGHT
VVorſhipfull, *Robert Debney*, Eſquire, Maior of the Citie of *Norwich*, Sir *Thomas Hyrne*, Knight, Sir *Peter Gleane*, Knight, and the reſt of the *Worſhipfull Iuſtices of* Peace, with he Sherifs and Aldermen of the Citie of *Norwich*.

*Right Worſhipfull and right Worthy* SENATORS;

SOme ignorant People imagining *Logick* to be nothing elſe but a kind of Sophiſtrie to deceiue the ſimple, haue not

ſpared to caſt aſperſions vpon this noble Art, and alſo vpon the publick Schooles where it is taught; affirming that ſuch as were ſent thither did but learne to turne *white* into *black*, & *black* into *white*, to ſerve their owne purpoſes, and to make people beleeue what they liſt. I wiſh that ſuch men would take the paines to reade over this Booke, or at leaſt conſider but the *definition* and *nature* of *Logick* here ſet downe in the very firſt lines of the ſame; and then I ſuppoſe they will eaſily perceiue that they haue but ſmall reaſon to ſpeake againſt the *rule* of reaſon. The beſt things may be abuſed; and ſo may *Logick* by a contentious caviling ſpirit: but the fault is not to be imputed to the *thing*, no more then drunkenneſſe to good Wine; but to the *perſon*, as good meates are corrupted by a bad ſtomacke, or ſweet oyle

oyle by a ſtinking veſſell For *Logick* teacheth not to practice quirkes and deceits, but to diſcover and avoyde them; as the laſt lines of this booke doe ſhew.

All Iudicious Authors both ſacred and prophane haue ever honoured this Art, and endowed it with right noble Titles. They haue ſtyled it the *Art of Arts*, the *ſcience of ſciences*, the *learning of learnings*, the *chiefe of all knowledges*, the *inſtrument of inſtruments*, the *hand of Philoſophy*, an *Art ſent from God*, yea and ſaid that *God himſelfe is* διαλεκτικώτατος, *the beſt Logician*: for indeed He is the beſt and trueſt Rule of all *reaſon* and *vnderſtanding*. Which being *that faculty* that *Logick* laboureth to perfect, this Art is ſo much more excellent then all other *Arts* and *Sciences*, by how much the *vnderſtanding*

*Doumhami Orat. ad auditores.*

ſurpaſſeth other *faculties* and *powers* of ſoule and bodie. It is the *mould* and *frame* into the which all other Arts and Profeſſions muſt be caſt, and without which they are no arts. It frames *it ſelfe* and *them*, and trieth them all by the infallible Rules of *Truth*, *Iuſtice*, and *Prudence*, termed by the Greekes κρτὰ πάντος, καθ' ἀυτὸ, and καθόλυ πρῶτον. It is the liuely ſpring of *invention*, the tribunall of *iudgement*, and the beſt Art of *memorie*. And ſay that a man be of the ſoundeſt braine and beſt naturall parts that can be, yet he may be bettered by this Art of *Logick*. For Art perfects Nature. And indeed without this helpe, nothing can be ſo *wittily* and *readily* inuented, nor ſo *truely* and *confidently* affirmed, nor ſo *methodically* and *orderly* diſpoſed; nor ſo *well* and

*ſafely*

*safely* remembred. This is the onely Art which diving into the depth of mans vnderstanding, teacheth *how to teach*, and *how to learne*, and makes a man *know that he knoweth*; as the eye seeth that it doth see, by reflection vpon a looking Glasse.

Now considering that every man hath a speciall interest in the vse of naturall reason, why should any man envie another the *sight* and *knowledge* of this Art, which should direct it. The learned Author having long since published a very excellent *Logick* in *Latin* for the Schooles, hath notwithstanding thought it not amisse to give his Countrymen this other in their *vulgar Language*. I hope therefore that sheltring my selfe vnder the Shield of so judicious a *Precedent*, I shall easily escape the darts

darts of such as would carpe at this my Translation of it out of the *French* into *English*; seeing it may as well profit the *English* as the *French*. And howsoever our Country wanted not this Art alreadie in *English*, yet the more Candles the better light. I will not heere enter vpon the commendation of this learned man, or of his Worke; I should but lessen his worth by the meanesse of my person and skill, and as it were light a Candle to the Sunne.

I had rather turn my speech vnto *You*, (worthy *Senators*,) vnto whom I haue emboldened my selfe to Dedicate these first fruits of my Studies, hũbly entreating your *Worships* to accept of this my poore labour, as a publicke testimony of my desire to bee thankefull vnto you all, for that it

it pleased your worthy Senate-house to choose me out of your *Grammer Free-Schoole*, & to send me as your poore Scholar to *Corpus Christi Colledge* in *Cambridge* in the yeare 1618. Thus craving pardon for my boldnes, hoping your kinde acceptance, I shall still pray for your *Worships* long liues, and happie gouernement of this famous Citie, resting

*Your* Worships *in all Christian dutie to be commanded,*

NATHANAEL DE-LAVNE.

# The Authors Epiſtle.

## TO MY LORD FREDERICK MAVRICE *de la Tour*, Prince of *Sedan*; Sonne and heire of the high and mightie Prince HENRY *de de Tour*, Duke of *Roullon*, firſt Marſhall of FRANCE, &c.

MY LORD,

*That which the hand is among Inſtruments, the ſame is* Logick *among other Arts and Sciences.*

*For*

*For as the hand is a generall Instrument that handleth all other instruments: So* Logick *is a generall Instrument, the knowledge whereof serveth to handle all other knowledges, and to make a skilfull vse of them. And as it is the propertie of Art to polish and perfect Nature: So it is the propertie of this Art to polish and direct naturall reason. For there is a certaine naturall* Logick, *which man vseth naturally, without any art; even the vnlearned sort will sometimes make a Syllogisme vnawares. But Philosophie, having searched out all the secrets of naturall reason, hath obserued the causes of a good Discourse, and hath set downe rules to that purpose.*

*Wherein appeareth the excellency of this Art aboue the rest. For seeing that man is discerned from a beast by the vse of reason: other Arts and Sciences frame man as he is a*

*Ci-*

*Citizen, or a Magiſtrate, or a Lawyer, or a Phyſician; but* Logick *frameth man as he is man, and maketh him after a ſort a more reaſonable creature by the right vſe of reaſon.*

*But this Art hath chanced to fall into bad hands, that haue robbed it of her naturall ornaments, and by a ſtrange Metamorphoſis haue turned it into a faggot of dry thornes, which pricketh on every ſide; and in ſtead of drawing the rules thereof from naturall reaſon, and fitting them for the vſe of man; they haue entangled it with Metaphyſicall queſtions, which are like vnto Crabs, where there is much pickling, but little meat, and are for no vſe, neither civill, nor religious.*

*This inveterate evill, which by cuſtome is turned into nature, would require a skilfuller Phyſician, and a quieter minde then mine is now, and a calmer ſeaſon then this*

*this wherein we are. Notwithſtanding being caſt vpon this place by the tempeſt, as a planke of the generall ſhipwracke, and brought to a ſorrowfull reſt, I haue beſtowed certaine houres vpon this Worke, and haue endeuoured to giue a milder looke and countenance to this Art, plucking thoſe thornes from it, which it had gotten in the Schooles; and cloathing it with a* French *habit, that it might no longer walke in* Fraunce *like a ſtranger. For theſe many Ages paſt it hath beene commonly taught in a moſt barbarous and thornie Latin, as if ſweetneſſe and elegancie could not ſtand together with ſoliditie.*

*If the publicke receiue any benefit out of this my labour, it ſhall be wholy beholding to my Lord the Duke your Father for it. Who hauing receiued mee into his houſe, and giuen me a fauourable entertain-*

tainment, with all kinde of respect and benefits; hath exhorted mee to undertake this taske, and to teach you the Precepts thereof; wherein I haue taken a singular delight. For, besides that it was a great honour to mee to doe you any service, it hath also given mee the occasion to try your wit; which I haue obserued to be endowed with a strong imagination, and a solide iudgement, and which is not discouraged through difficulties: and by a laudable curiositie will not be satisfied but with reason, and where the same is not evident enough, mooveth doubts of it selfe. Whence it is easie to conceiue how great the dexteritie of your wit will be, when time and necessitie shall giue you occasion to make vse of it in things of a higher and more important nature.

*The feare of God being ioyned to this so quick and iudicious a spirit, which hath planted in your heart a hatred of vice, and mooved it with a holy ambition, to consecrate your life to the service of God, what may wee not hope of such a disposition, which God hath so greatly favoured? especially considering that you are brought vp in a familie, whence all bad examples, and all idle words are banished, and where the service of God is carefully maintained: and haue before your eyes the example of my Lord your Father, who among* Princes *is a notable patterne of wisedome, of great experience, of singular vnderstanding, and of wise gouernement: whose courage rouseth it selfe against aduersitie, and whose minde is not daunted through affliction. To whom nature hath given more than others*

haue

haue gotten by ſtudie and induſtrie, having a naturall facilitie to compaſſe that, which others by long meditation cannot attaine vnto. Whoſe words are to you as daily leſſons, and his wiſe actions as a continuall patterne.

He it is from whom you haue receiued, that Learning is a goodly ornament to a Prince. Becauſe he that guides others muſt haue the clearer ſight; and that hee muſt haue moſt knowledge, that hath moſt imployment. There being nothing more vnbeſeeming a Prince, then, to bee inferiour to the moſt part of his Subiects in vnderſtanding and good knowledge, and to owe all the preferment he hath to his birth, and nothing to his vertue; and who to iudge aright of things, muſt ſearch into another mans braine for that which hee

ſhould finde in his owne. This happeneth vnto ſuch Princes as haue ſpent all their younger yeares in learning how to manage horſes, rather then to goverene the mindes of men, who are creatures a thouſand times more vnruly and vntamed. whoſe outword behaviour is taught, whileſt their ſoules are left vntaught: who imploy moneths and yeares in hunting after wilde beaſts, whileſt they themſelues are caught by domeſticall beaſts, that is to ſay, by flatterers, that intangle them in vices. Who are taught to liue, as if their Subiects were made for them, whereas they are made for the good of their Subiects; and to remember that they are Princes, but not to call to minde, that they are men ſubiect to the ſame infirmities: and that having receiued of God more graces then

*then others, they haue the greater account to giue vp vnto him; and that being the image of God vpon earth, they ought to ſtriue to bee like vnto him, not onely in Iuſtice, clemencie, liberalitie, and fore-ſight; but chiefly in that GOD raigneth over his Subiects, not for his owne good, but for theirs.*

*Now when I ſpeake of Learning, I doe not meane a laborious knowledge, busying it ſelfe about words or ſwelling Diſcourſes, or about heaping vp of much Latin. But I am of opinion that the true learning of a Prince conſiſteth in the knowledge of God, and of the world, and of himſelfe, and of the affaires of his owne Eſtate and of his neighbours; and to be a Scholar of the dead, I meane, to ſearch in Hiſtories the examples of wiſedome;*

*and to learne the trade of a Prince, which is the hardeſt of all. Becauſe it is a hard matter to walke ſteadily vpon the top of a very high place, the braine of him eaſily turning that is very high mounted. And alſo becauſe the actions of Princes are moſt controuled, and their life moſt croſſed, and their faults moſt expoſed to view, and that they authorize vices by their example.*

*Theſe inſtructions, my* Lord, *are familiar vnto you, and you want no domeſticall helps. Notwithſtanding I haue thought that you would not take it amiſſe, if I endeuoured to contribute ſomewhat thereunto: and that by this my labour, as by a ſmall euidence, I ſhould teſtifie my acknowledgment of the honour which I haue receiued of my Lord your Father, and how earneſtly I pray vnto*

*vnto* GOD *for the proſperitie of your moſt illuſtrious houſe, and more particularly for your ſelfe, my* Lord, *as being*

Your moſt humble
and moſt obedient ſervant,

DV MOVLIN.

# A Table of the Chapters.

## The first Booke, which treateth of SIMPLE NOTIONS.


*Chapters.* *Pages.*

1. WHat Logick is. How many sorts of Notions there be in the mind of man. 1.
2. How many sorts of Simple Notions. Of Singulars and vniversals. Also of Substance & Accident. 2.
3. The names of the tenne Categories. 6.
4. Of Substance, 7.
5. Of Quantitie. 9.
6. Of Qualitie. 13.

7. Of

| Chapters. | | Pages. |
|---|---|---|
| 7. | Of Relation and Relatiues. | 18. |
| 8. | Of Acting or Action. | 22. |
| 9. | Of Suffering or Passion. | 25. |
| 10. | Of Where. | 26. |
| 11. | Of When. | 28. |
| 12. | Of Situation. | 29. |
| 13. | Of Habit. | 29. |


# The second Booke.

## *Of the places of Invention.*


| Chapters. | | Pages. |
|---|---|---|
| 1. | HOw these Simple Notions are of vse for an argument. | 31. |
| 2. | Of the Genus. | 33. |
| 3. | Of the Species. | 36. |
| 4. | Of the difference. | 38. |
| 5. | Of Proper. | 39. |
| 6. | Of the Accident. | 41. |
| 7. | Of the Whole and Parts. | 43. |
| 8. | Of Definition. | 48. |
| 9. | Of Diuision. | 52. |
| 10. | Of | |

| Chapters. | Pages. |
|---|---|
| 10. Of things coupled, called in Latin *Conugata.* | 55. |
| 11. Of Cauſes and Effects. | 57. |
| 12. Of Etymologie. | 69. |
| 13. Of things Alike or vnlike. | 71. |
| 14. Of things Oppoſit. | 75. |
| 15. Compariſon of things. | 82. |
| 16. Compariſon of the Probabilitie, or Likelihood. | 85. |
| 17. Of teſtimony. | 88. |
| 18. Of the Vſe or Practice of the Precedent Doctrine. | 91. |


# The third Booke.

## *Of Enuntiations.*


| Chapters. | Pages. |
|---|---|
| 1. WHat an Enuntiation is, and the parts thereof. | 105. |
| 2. Of the kinds of Enuntiation. | 109. |
| 3. Of the Oppoſition of Enuntiations. | 113. |


4. Of

4. Of the Conuerſion of Enuntiati-
ons, 117.

# The fourth Booke,

## Of a Syllogiſme.

*Chapters.* *Pages.*

1. VVHat a Syllogiſme is. Alſo what a Concluſion is, and a Queſtion or Probleme, and of the parts thereof. 121.
2. How to make a Syllogiſme, and of the parts of it. 123.
3. The naturall reaſon vpon which a Syllogiſme is grounded. 126.
4. Of the Figures of a Syllogiſme. 127.
5. Generall Rules common to all Figures. 128.
6. Particular Rules to each Figure. 134.
7. Certaine Artificiall words, which ſerue to ſhew how many wayes wee may argue in each Figure, and

| Chapters. | | Pages. |
|---|---|---|
| | and the meanes to convert the second and third figure into the first. | 142. |
| 8. | Of an Enthymeme. | 146. |
| 9. | Of Induction and Example. | 148. |
| 10. | Of the Enumeration of parts. | 150. |
| 11. | Of a Dilemma. | 152. |
| 12. | Of a Sorites or heaping Syllogisme. | 154. |
| 13. | Of Conditionall or Hypothetical Syllogismes. | 155. |
| 14. | Of Disjunctiue Syllogismes. | 157. |


# The fift Booke.

## *Of the Master-peece of* Logick *called* Demonstration.


| Chapters. | | Pages. |
|---|---|---|
| 1. | VVHat Science is. | 161. |
| 2. | What a Demonstration, | |


or

| Chapters. | | Pages. |
|---|---|---|
| | or a Demonſtratiue Syllogiſme is. | 163. |
| 3. | What queſtions are demonſtrable. | 164. |
| 4. | What the propoſitions of a demonſtratiue Syllogiſme ought to be. | 166. |
| 5. | A ſpeciall note how to know a perfect demonſtration. | 169. |
| 6. | Of an Imperfect demonſtration. | 170. |


# The ſixt Booke.

## *Of Sophiſmes or Fallacies.*


| Chapters. | | Pages. |
|---|---|---|
| 1. | OF Fallacies in words. | 175. |
| 2. | Of fallacies in the matter. | 181. |
| 3. | The fallacie by Accident. | 182. |
| 4. | The fallacie which taketh a thing as ſimply true which is not ſo, but onely in ſome reſpect. | 183. |
| 5. | The fallacie ſuppoſing that which is queſtioned. | 184. |

| Chapters. | | Pages. |
|---|---|---|
| 6. | The fallacie of Inconſequence. | 184. |
| 7. | The fallacie whereby a thing is taken for a cauſe, which is not. | 186. |
| 8. | The fallacie which mingleth many Interrogations, as if they were but one. | 187. |
| 9. | The fallacie which is committed through the Ignorance of that, which contradicteth the queſtion. | 188. |
| 10. | Of the faults in Syllogiſmes. | 190. |


ERRA-

## ERRATA.

PAge 42. line 19. for *by blunt hornes*, reade *by the blunt hornes*. p. 49. l. 23. for *New*, r. *None*. p. 50. l. 13. for *an axe*, reade *an axe*. page 55. betweene line 10. and 11. put *Accidents into other Accidents*. p. 80. l. 7. for *certaine*, r. *contrary*.

# THE ELEMENTS OF LOGICK.

## The first Booke, which treateth OF SIMPLE NOTIONS.

### The first Chapter.

*What* Logick *is. How many sorts of* Notions *there be in the minde of man.*

LOGICK is an Art which giueth rules to argue well, and to discerne truth from falshood.

To be able to form an argument, and to frame a good reason, we must

know, that all the Notions or Conceptions in mans vnderstanding are, either Simple, or Compound.

Simple Notions are such, as are expressed by one word onely; As, *horse, man, whitenes, to see, to runne*, &c.

Compound Notions are such, as are expressed by an Enunciation or Proposition, which affirmeth or denieth something; As, *Man is reasonable. God is no lyar.*

Of many Propositions knit together, an Argument or Syllogisme is made, by those meanes and rules, which shall be set downe hereafter.

## The second Chapter.

*How many sorts of simple Notions there are. Of Things singular and universall. Also of Substance and Accident.*

THere are as many simple Notions as there be things in the world.

Of Things some be singular, and some vniversall. Sin-

Singular things are those, which are one in Number; As, *Frederick*, *Peter*, *this horse*, *this tree*.

Vniversall things comprehend and containe the Singulars. For an vniversall is a gathering together of many Singulars vnder one nature common to all. As, *horse*, *man*, *tree*, vnder which words considered in generall, wee comprehend all horses, men, trees.

Singulars are knowne by sense, but vniversals are comprehended by the vnderstanding. Therfore bruit beasts know onely Singular things. Singulars in Philosophie are called *Individuals*, because they cannot be divided into two parts, keeping the same name. As, *Alexander* cannot be divided into two *Alexanders*, nor one *horse* into two horses.

A whole compounded of parts alike; As, *water*, *blood*, *wood*, are not called *Individuals*, because they may be divided into parts, which may keepe the name of the whole. For every drop of water is water, and of a great peece of wood every parcell is

wood. But if you will turne these things into *Individuals*, you must add the name of the measure. For one pint of water cannot be divided into two pintes, nor one acre of ground into two acres.

All things, whether Singular or Vniversall, are either Substances, or Accidents.

A Substance is that which subsisteth of it selfe; as, *man*, *water*, *earth*, &c.

An Accident is that which cannot subsist by it selfe, but must haue a subject or substance to vphold it, and vnto which it must adhere; as, *whitenes*, *swiftnes*, *wisedome*, *heat*. For whitenes can haue no being, if it subsisteth not in some subject; as, in snow, or in the skinne: so heat is an accident to fire; swiftnes is an accident to an horse; wisedome is an accident to the vnderstanding.

Accidents are sometimes expressed by a Substantiue; as, *iustice*, *beautie*; and sometimes by an Adiectiue; as, *iust*, *faire*. In the first manner, accidents are called Abstracts, or Separated;

ted; In the ſecond, they are called Concretes, or Conjoyned. For he that names *iuſtice*, or *beautie*, conſiders juſtice or beautie without any certaine Subject. But he that names *iuſt* or *faire*, conſiders juſtice and beautie, as adhering to a certain Subject that is cloathed therewith.

Common cuſtome oft confounds theſe things, ſaying, *the true, the black, the ſweet*; in ſtead of ſaying, *the truth, the blackneſs, the ſweetneſſe*.

Now becauſe there are divers and ſundry kindes of accidents, the Philoſophers haue ranked them into nine Orders or Claſſes of things; vnto which Subſtance being added, there are ten Claſſes, which the Philoſophers call Categories or Predicaments. So that there is nothing in the world which is done either by Nature, or by Art, by Councell or Chance, which may not be referred to, and contained in ſome one of theſe Categories.

## The third Chapter.

### *The Names of the ten Categories.*

The ten Categories are these.

1. Substance; as, *man, horse.*
2. Quantitie; as, *length, breadth.*
3. Qualitie; as, *swiftnesse, whitenesse, roundnesse.*
4. Relation or Respect; as, to be *a Father*, or *a Sonne*, *a Master*, or *a Servant*, &c.
5. To Act, or Action; as, *to runne, to speake.*
6. To Suffer, or Passion; as, *to be driven, to be burned.*
7. Where; as, *here, there.*
8. When; as, *yesterday, to day.*
9. Situation; as, *to sit, to stand, to kneele.*
10. Habit; as, *to have a cap on, to have hose on, to have a cloake on.*

The

## The fourth Chapter.

### *Of Substance.*

SVbstance is that which subsisteth of it selfe, and is the subject of all Accidents.

*Singular* Substances, are called, *Primary* Substances.

*Universall* Substances, are called *Secondary* Substances. Because that singular substances are first knowne. So children that haue no knowledge but by sense, wanting yet the vse of reason, know nothing but singular things. This knowledge is common vnto vs with bruit beasts. But afterward reason gathering divers Singulars together, comprehendeth them vnder Vniversall things.

*The Sunne, the World, the Moone,* are primary and singular Substances; yet in regard that they haue a nature and essence, which might agree with many, if it so pleased God, they are also secondary substances.

All ſubſtances are either vncreated or created: the vncreated ſubſtance is God, all other are created.

Created ſubſtances are cloathed with accidents: but God hath no accident. For he is ſimple, and not compounded: his Attributes beeing his owne proper eſſence, which wee diſtinguiſh in regard of their divers effects; but in truth they are but one and the ſelfe ſame thing.

Of created ſubſtances, ſome are Immateriall, as, Angels and Spirits; others are Materiall, namely, Such as haue bodies, whereof here is a more exact Diviſion.

# The Table of Subſtances.




Place this Table of *Subſtances* betweene Page 8 and 9. at this hand



There can be nothing contrary to substance. Also, no substance is more substance then another, as, one horse is not more a horse then another, although it be a better horse. True it is that God and the Deuill are substances, and that there is a contrarietie betweene them. As also fire is contrary to water; but this contrarietie is not in the substance, but in the will of the Divel's, and in the qualitie of fire and water.

## The fist Chapter.

### *Of Quantitie.*

QVantitie is that by which Substances are numbred, measured, or divided; and by which they are equall, or vnequall.

There be two sorts of Quantitie.

The one is compounded of severed and disjoyned parts, and therfore is called disjoyned Quantitie.

The other is compounded of continued parts, and therefore is called continued Quantitie. Quan-

Quantitie disjoyned or ſevered is called Number, becauſe the parts haue betweene them no Continuitie. This Quantitie cannot be meaſured, but muſt be numbred.

Number is of two ſorts; either *numbring*, or *numbred*.

Numbers numbring are the numbers of Arithmetick, as, *one, three, ſix*, &c. Numbers numbred are the things that are numbred, as, *ſix men, ten horſes*, &c.

Sometimes the number numbred ſtands in ſtead of the number numbring, as, *Counters*.

Vnitie is no number, but the beginning of number.

The greateſt number of all cannot be found or imagined. For a man may ſtill adde to the greateſt number that can be given.

Continued Quantitie is that whoſe parts are joyned together with a continued ſequell, and which may be meaſured. This Quantitie is either, a Line, or a Superficies, or a Mathematicall bodie, or Time.

A Line is a length without breadth, as, *a wyle, a measuring wand.*

Superficies is a length with breadth, as, *the surface of the water*, or *of an acre of Land.*

Vnder the Superficies we comprehend also the Place, which is nothing els but the interiour Superficies of a bodie, containing another, as, the inward Superficies of a Hogs-head of Wine, is the place of the Wine.

A Mathematicall bodie is length, breadth, and depth; this bodie differs from a Physicall or naturall bodie, which is a materiall substance, and not a quantitie. Notwithstanding every naturall bodie hath these three dimensions, and cannot be without quantitie.

Time is the measure of the continuance of things. This measure is taken from the motion of the heavens, which maketh dayes and yeares.

Time hath two pars, namely, past, and to come: as for the present it is not time, but it is the instant or running-moment, which coupleth together

ther the time past, with the time to come.

The continuance of God is not called time, but Eternitie, which consisteth in two things. First to haue neither beginning nor ending. Secondly, not to passe away, nor so haue succession of parts. For the life of God consists in rest: because that if the life of God had a flux or succession of parts, his life were partly past, and partly to come.

As Vnitie is neither number nor quantitie, so a Prick is neither quantitie, nor part of a line: as also a moment is no part of time, but the end or extremitie of time past.

Number is ancienter then continued quantitie, as it appeareth by the number of the Persons in the Trinitie, which is eternall and without beginning of time. But continued quantitie had a beginning with the creation of bodies.

Again, number may be counted by it selfe, and without any other helpe, but continued quantitie cannot be mea-

measured but by the helpe of the discontinued quantity. For every length or breadth is measured by the numbring of the feet, or inches, or meting-wands, or myles, or degrees.

Nothing is contrary vnto quantitie. For great and little are not contraries, but Relatiues or Respectiues; and one containes the other, which cannot be in contraries. The lesse number is contained vnder the greater, and is part of it: But heat is no part of colde.

*The Table of Quantitie.*

Quantitie is either
- Discontinued, which is called Number
  - Numbring
  - Numbred.
- Continued
  - A Line.
  - A Superficies.
  - A Bodie.
  - Time.

## The sixt Chapter.

### *Of Qualitie.*

QValitie is that whereby substances are qualified, and made like or vnlike one to another. For as things are

are said to be the *same* things, when they haue one selfe same substance; and *equall* when they agree in quantitie; so they are said to be *alike*, when they agree in qualitie.

There are foure sorts of Qualities.

1. For they are either Actiue qualities, which be in the obiects of our outward or inward senses, and bring vnto vs some alteration or change in our bodies, or mindes, as, *sweetnes* in hony, *coldnes* in snow, *beautie* in a face, *hardnes* or *roughnes* in a stone, or in a bodie, which hurteth the sense of touching, *delight* in a Comedie. The effects which these qualities do work in vs are called Passion, whileſt it is received. For when the smart of burning is over, the marke or blacknes that remaineth, is no longer called Passion.

2. Or els they be naturall qualities or faculties, as, *the vertue* of hearbs, *the faculties* of the soule, *heauines* in lead, *heat* in fire, and *coldnes* in water.

3. Or els they be habits, or qualities gotten by studie and exercise, as all

Arts

*Arts* are, whether mechanicall or liberall; and all *Sciences*. Which when a man hath attained vnto, and gotten a habit of them, he is thereby made the fitter for any action or exercise.

Bruit beasts that haue hearing, as, *dogs*, *horses*, *apes*, &c. are capable to get a habit, if feare doe not hinder them. For such creatures as are excessiuely timerous cannot be taught, as, *mice*, &c.

The instruments by which the habit is put into practice may be lost, and yet the habit remaine still, as, the *skill* of playing on the Lute, when the *hand* is cut off.

The preparation to a habit is called Dispositiō, which is when a man hath not as yet gotten a habit, but is in the way to it, and hath besides his inclination some little knowledge.

Naturall faculties are great helpes to get and forme a habit. For he that by nature is vnfit to any Art or studie, can neuer attaine vnto a perfection, whatsoeuer paines he takes in it.

4. Or els they are Figures and outward

ward formes, as, *to be square, round, sharp, crooked, wrong, straight.*

Qualities are contrary one to another, as, *heat*, and *coldnes*. And naturall powers are contrary to impotencie, as, *sight* to *blindnes*, *hearing* to *deafnes*. Onely Figures & outward formes haue no contraries. For *roundnes* differeth from *squarenes*, but is not contrary vnto it.

To judge aright of any qualitie, it must be considered in the abstract, and as not being tyed to any certaine subject: So *iustice* or *whitenes* are to be considered in themselues, and not the just or the white. Because the consideration of the subject in the which justice or whitenes are inherent, doe but trouble & divert mans thought. Therfore if you will consider a thing aright, you must consider it apart and separated.

One substance can haue but one quantitie, but it may haue a great number of divers qualities.

Qualities doe act, but quantities doe not, onely they doe helpe the action

action of the qualitie, as, the *greatnes* of a stone encreaseth the *weight* of it.

A Spirit hath qualities, but no quantities.

The excellencie of qualitie aboue quantitie, consists principally in that the quantitie proceeds from the matter, but the qualitie from the forme. Now the forme is ever more excellent then the matter. For by the forme things are made fit to act; but matter is that which makes them apt to suffer.

Forme and Figure act not, but they helpe and facilitate the action of him that acteth, as, the *roundnes* of a stone makes it to *rowle* the easier.

*The Table of Qualitie.*

Qualities are
1. Such as act against the senses { Outward. Inward.
2. Natural power or Impotencie.
3. Habits, whose beginning is called Disposition.
4. Outward formes and figures.

## The seuenth Chapter.

### *Of Relation and Relatiues.*

RElatiues are two things which haue a mutuall respect one to another, so as the one cannot be without the other, and the one is defined by the other, neither can the one be thought vpon without thinking vpon the other, as, *the Father* and *the Sonne*, *the Prince* and *the Subiects*, *the master* and *the seruant*, *the double* and *the halfe*, *the equall* and *the equall*.

The mutuall respect between these two things is called Relation. There be many Relatiues which haue the selfe same name, as, *friend* and *friend*, *like* and *like*, *equall* and *equall*.

The relation between two friends is called *friendship*; the relation between two things alike, is called *resemblance* or *likenesse*.

There be relatiues whose relation is imperfect, namely, when one of the two relatiues dependeth on the other, and

and cannot be without it, but the other may well be alone, and dependeth not on his relatiue, as, *the Paſtor* and *the flock*, *the Prince* and *the people*, *the ſight* and *the thing viſible*. For there may be people without a Prince, but no Prince without people.

There be alſo relatiues, which are not relatiues in their owne nature, but only in regard of vs, and becauſe we make them ſo to be by our conceiving of them: as, *the right* and *the left* between two walls, or two trees: but if we turne our ſelues, then that which was left, is right. For in a tree there is neither right nor left by nature.

If a Father haue many ſonnes, there are as many ſundry relations, as there be ſonnes; becauſe the Father is taken divers times as is the center of a Circle, which is taken as often as the lines are drawne from the ſaid center to the circumference.

One and the ſame thing may haue the name of two relatiues; as, *to be Father* and *Sonne*, *to be high* and *low*; but

in divers respects. For the same may be Father to one, and Sonne to another.

There be relations which spring from quantitie, as, the relation which is between *the double* and *the halfe*; Others that proceed from Qualitie, as, the relation between *two friends*. Others which come from Action, as, the relation between *the mother* and *the sonne*, *the Creator* and *the creature*. Others that spring from Situation, as, *the right* and *left*, *the high* and *lowe*, *the formost*, and *the hindermost*; between which Relatiues the relation hath no name.

We call that *formost* in living things, towards which the naturall motion is made; we call *right* that part which naturally is fittest for service. In a living creature we call that part *high*, by which the nourishment is drawne; as, in Plants, the root is the highest part, not in regard of the vniverse, but in regard of the Plant.

Such relations as are grounded vpon qualitie, admit of contrarietie, as,

*friend-*

*friendship*, *likenes*: other relations admit of none.

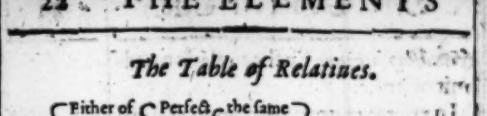
In relations grounded vpon action, as betweene *that which heateth*, and *that which is heated*, there is no contrarietie. For *that which heateth*, and *that which cooleth* are contraries; but this contrarietie proceeds from the qualitie, namely, *heat*, which is the ground of this relation.

*Friendship*, as it is an affection moving the lover, is a qualitie; but as it is a mutuall respect betweene two friends, it is a Relation.

Although God, as he is Master and Creator, be a relatiue to his servants and creatures, there is not for all that any accident in God: because the relation is not *in* the two relatiues, but *between* the two relatiues. And therefore it bringeth in no composition, nor to the substance any naturall change.

It is to be noted that two relatiues are commonly called the two termes of the relation.

*The Table of Relatiues.*




## The eight Chapter.

### *Of Acting or Action.*

TO Act is to moue it selfe against the patient, and to make it receiue the power of the Agent.

Of Actions some be naturall, as, *the panting of the heart, the motion of a stone downeward.* Others are voluntary, as, *to buy, to sell, to paint, to fence*; which notwithstanding are not done without the helpe of nature. Others are mixt, that is to say, partly naturall, partly voluntary: as, *to eate, to walke, to runne*; which indeed are naturall actions, but are guided by the will.

Violent actions and against nature, are such as are contrary to naturall actions,

actions, as, *the throwing of a stone upward.* But those are contrary to voluntary actions, which are called forced or constrained, as, *to be pulled or haled into prison.* There bè certaine actions that are partly voluntary, partly forced, as, *when a Merchant casteth his merchandize into the Sea to ease the ship*; or *when a Patient causeth his arme to be cut off.*

The naturall actions and motions are swiftest in the end; as, *the falling of a stone downeward.* The voluntary actions are swiftest in the middest; as, *running.* The violent are swiftest in the beginning; as, *the casting of a stone*; or, *shooting of an arrow.*

Every action importeth a certaine motion. If the motion be in the substance, it is called Generation, or Corruption. If in the Quantitie, it is called Augmentation or Diminution. If in the Qualitie, it is called Alteration. If in the place, it is called Locall motion, or Transportation.

There is no generation without corruption, nor no corruption with-

out generation. But we call it generation, when the matter takes a better forme; and corruption, when it passeth into a worser.

The lócall motion is the chiefest of all motions, without which the rest mooue not at all. And besides there is no other motion belonging to the heavens; where motion is the cause of all other motions, as well in Substance, as in Quantitie, and Qualitie.

The heavens in regard of the whole doe rest, but in regard of the parts, doe change place, even as a Top that sleepeth turning.

*The Table of Actions.*

Actions are { Naturall. Voluntary. Mixt. Violent.

*The Table of Motion.*

Motion is on the { *Substance*, and is called { Generation. Corruption. / *Quantitie*, and is called { Augmentation. Diminution. / *Qualitie*, and is called *Alteration*. / *Place*, and is called Transporting or Local motion.

The

## The ninth Chapter.

### *Of Suffering or Paſsion.*

TO Suffer is to receiue the power of the Agent.

There are as many kinds of Suffering, as of doing.

Oftentimes the Agent doth ſuffer in acting, as, when a man rowling a weightie ſtone tireth himſelfe, and ſweateth: or when a man hurteth his teeth in cracking a Nut. The Agent doth not ſuffer, when it is out of the compaſſe of the Activitie of the Patient, as, the Sunne ſhining on the water, receiveth not the brightneſſe which the water ſend's back: becauſe it is out of the extent, which limiteth the reflection of the beames ſent back againe by the water.

God acteth alwayes, and every where, but never ſuffereth.

There are Verbs Actiues in Grammar, which are Paſſiues in Philoſophie, as, *to loue, to heare, to learne*: for all

all these are Passions, and are done by receiving. On the contrary, he which is loved or heard, is he that acteth & moueth the lover and the hearer.

There are some Passions perfecting, and others which are corrupting, as, *the inlightning in the aire, the receiving of learning in the vnderstanding*, or *of the images of things in the sight*, are Passions, which bring some perfection to the aire, to the vnderstanding, and to the sight.

The corrupting Passions are such as would destroy the Patient, if they did continue their encrease, or did increase aboue measure, as, *heating, cooling, wearisomnesse.*

The perfecting Passions are those which perfect a faculty or naturall power, and giue it that perfection for the which God did create it.

## The tenth Chapter.

### *Of Where.*

WHERE is not the place it selfe, but it is a designation, or

or a note of ſome certaine place. For place is a quantitie, and a ſpace that may be meaſured: But the *Where* cannot be meaſured. When a man putteth forth a queſtion touching the Place, the demand is, by *how much*, as for example, *how much place doth ſuch a bodie take vp?* But here the queſtion is by *where* or *whither*, as, *where is the King?* and, *whither goe you?*

Concerning Bodies the queſtion may be asked, how much place they take vp: but concerning Angels and ſoules, that queſtion cannot be asked, but onely this, where they are. This is it which the Philoſophers meane when they ſay, that Bodies are in a place *Circumſcriptively*, and Soules *definitively*; becauſe Soules are not limited or circumſcribed by place, and yet a man may ſay of them, that they are here, or there, and not els-where.

We cannot ſay that God is in a place any of theſe waies. For he is infinite, and ſo preſent in all places, as he is neither limited, nor defined by any place. It may be truely ſaid, GOD is here,

here; but it cannot be said, GOD is here, and not there.

## The eleventh Chapter.

### *Of When.*

WHEN is not the time it selfe, but it is a designation, or a note of a certain time, as, *yesterday, to day, to morrow*, &c.

When we speake of time, and of the continuance of it, the question is, by *how long?* as, *how long lived Noah? how long did the Romaine Empire continue?* But here wee aske by *When*, as, *When shall wee have the Equinoxe? When was Iulius Cæsar slaine?*

Some things are done in time, which notwithstanding are not measured by time; namely, such as are done in a moment, as, *the impression of a Seale; the inlightening of a chamber by the aire at the opening of the windowes; the receiving of the images of things in the eye.* Concerning these things, wee aske not in how long time, but when they were done.

The

## The twelfth Chapter.

### *Of Situation.*

SItuation is a Position or placing of parts in their whole, whether the situation be naturall; as, *the situation of the arme at the shoulders end*; or voluntary, as when we *sit*, or *kneele*.

## The thirteenth Chapter.

### *Of Habit.*

BY Habit we doe not vnderstand garments, for they belong to substance; but we meane the applying of garments and other ornaments about the bodie, as, *to be cloathed, to be shod, to haue a Cassock or a Cloake on.*

Vnder these ten Classes or rankes of things, are contained all things in the world, and all simple Notions. And of these are framed Enuntiations

ons and Arguments or Syllogiſmes, whereof wee ſhall ſpeake hereafter. For there is nothing in the world out of which a man may not draw ſome Argument or Diſcourſe.

The

# The ſecond Booke,

*Which is*

# OF THE PLACES OF INVENTION.

## The firſt Chapter.

### *How theſe ſimple Notions are of vſe for an Argument.*

TO ſhew how theſe ſimple Notions enter into an Argument, or Syllogiſme, and how they are of vſe for Reaſoning & diſcourſe, they muſt be cloathed with other names. For if wee ſhould conſider them no otherwiſe then as they are handled in the Categories, they would never ſerue to open a diſcourſe, and to frame a reaſon. For as it

it is one thing to consider Leather or wood in themselues, & another thing to consider them as they are a fit matter to make a shoo or a bench: So it is another thing to consider things as they are in themselues, and another thing to consider them as they are meanes or instruments of reasoning. We haue considered in the Categories things as they are in themselues, now we are to consider them as they may serue to argue and discourse.

And therefore when a man will search out the truth of any question, (as for example, *Whether voluptuousnesse be a good thing*) and desires to gather proofes to proue or to impugne the question propounded; all that can be brought, is either,

1. The Genus of that which we desire to proue,
2. Or the Species.
3. Or the Difference.
4. Or the Proper.
5. Or some Accident.
6. Or the Whole or some part of the Whole.

7 Or

7. Or the Definition.
8. Or the Diuision.
9. Or ſomething coupled vnto it.
10. Or the Cauſe or Effect.
11. Or the Etymologie.
12. Or ſomething Like or Valike.
13. Or the Oppoſit.
14. Or a Compariſon in the things.
15. Or a Compariſon in the Probabilitie.
16. Or ſome Teſtimony.

Of all which heads we are now to treat of in particular, that wee may know what they are, and how to make vſe of them.

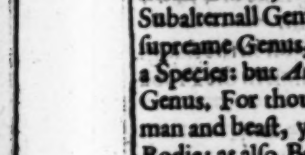
## The ſecond Chapter.

### *Of the Genus.*

THe Genus is a nature which belongeth vnto many things differing in Species. As this word, *Animal*, is a Genus ſignifying a nature common both to *man* and *beaſt*: Animal is the Genus; man and beaſt are

the Species. So *Plant* is the Genus of *Trees* and of *Herbes*; and *vertue* is a Genus whose Species are *Iustice*, *Temperance*, &c.

There is a Supreame and most Generall Genus; and an Inferiour and Subalternall Genus. As *Substance* is a supreame Genus, which can never be a Species: but *Animal* is an inferiour Genus. For though it be a Genus to man and beast, yet it is a Species to Bodie: as also Bodie is a Species to Substance. As in this Table;




Such Genuses are equally attributed to their Species, and vpon the same ground. But there are some Æquivocall Genuses, which are attributed to divers Species vpon divers grounds. As this word, *Wolfe*, is attributed to a terrestriall deuouring creature, and to a Fish, and to a certaine disease.

A Genus Analogicall is that which is attributed to divers Species, though not altogether in regard of the same cause, yet for some respect or similitude. As this word, *Foot*, is attributed to the foot of *a living creature*, and to the foot of *a Table*, and of *a Verse*, and of *a mountaine*, and of *a drinking glasse*. So the word *healthfull* is attributed to *the bodie*, and to *the Aire*, and to *exercise*, and to *urine* in divers senses, and yet with some agreement too. Commonly such a Genus agreeth primarily to some one of the Species, and then secondarily to the rest, by reason of some relation which it hath with them, as may appeare by the forenamed examples. For the word *Foot*, first and properly is said of the foot of a living creature, and afterward of the foot of a mountaine or of a Table by a certaine resemblance or proportion. So likewise *to be healthfull* is said first of the body, and then of exercise, and of urine, because they are helpes or markes of bodily health.

*The Table of Genus.*

Genus { Supreame / Inferiour { Vnivocall, as, *Animal, Plant.* / Æquivocall in { whole, as *wolfe.* / part when }

there is some relation or agreement among the Species, As, *foot, healthfull.*

## The third Chapter.

### *Of the Species.*

SPecies is a nature comprehended vnder the Genus, which beeing joyned with a difference maketh a Species. So *man is a reasonable creature*: *creature* is the Genus of man, and the word *reasonable* is the difference which distinguisheth man from other sorts of creatures.

There be two sorts of Species. The one most speciall, which can never be a Genus, as, *man, lyon, elephant, gold*: For such Species cannot be divided into other Species: but onely into singular Substances or Individuals.

The other is a Subalternall Speciel, which

which being compared with an inferior Species is a Genus. As, the word, *Animal*, is a Species in regard of a Bodie: but a Genus in regard of man.

From the Genus and Species are drawne Arguments for Discourse; and such arguments are grounded vpon these Maximes following.

Maximes.

1. *Whatsoever agreeth with the Genus, agreeth also with the Species.* For whatsoever may be said of *a tree* in generall, may be said also of *the Laurell*, &c. Excepting that which is attributed to the Genus, as it is a Genus. As to be more generall then the Species, and to containe them.

2. *That which agrees not with the Genus, agrees not with the Species.* For that which cannot be said of *animal*, cannot be said of *man*.

3. *It is not necessary that the Species be wheresoever the Genus is.* For if such a thing be *an animal*, it followeth not that it must therefore be *a man*.

4. But on the other side. *Where the Species is, there the Genus must needs be also.* For whosoever is *a man*, is also

*an animal.* And whosoever saith, that *this is a lettice*, doth by consequent affirme, that *it is an herb.*

## The fourth Chapter.

### *Of Difference.*

DIfference is that, whereby one thing differeth from another.

Of differences some are greater then others. For there are things which differ onely in number; as *Peter* and *Iohn.* There be others which differ in the Species, as, *man* and *beast.* There be others also which differ in the Genus, as, *a man* and *a stone.* But the greatest differēce is, when two things are in two divers Categories, as, *a horse* and *whitenes.*

There be also essentiall differences, and accidentall differences. As, a man differeth from a horse in essence, and definition. But a French man differs from a Moore onely in colour and complexion, which are accidents, and not things which make man to be man. Among

Among the essentiall differences, the principall and most considerable is that, which is called Superficiall, by which the Species of the same Genus differ essentially. This difference hath these two properties. That it constitutes the Species; And divides the Genus. Thus the *life sensitive*, is the difference which constitutes *the animal*, and maketh the animal to be Animal. The selfe same difference divideth the Genus; namely, *Living*. So likewise *to be reasonable*, is the difference which divideth *animal*, and constitutes man. And the same perfection which maketh man to be man, is that which maketh him differ from other Animals.

## The fift Chapter.

### *Of Proper.*

PRoper is of two sorts. For there be some properties most-proper, and others lesse-proper to a thing.

The properties most-proper, are

such as are attributed to the singulars of the same Species, and with them onely, and that alwayes. As, it is the propertie of the Loadstone *to draw Iron*. And it is the propertie of man, *to be able to laugh*, and *speake*: and of a horse *to neigh*: and of an oxe *to bellow*.

The properties lesse-proper, are such as agree onely to the singulars of a Species, but neither alwaies, nor to all. As it is proper to a man *to be a Philosopher*, or *a Musician*: but neither to every man, nor at all times. So it is the propertie of the Moone *to be Eclipsed*, but not at all times. And the propertie of Plants *to loose their leaues in Winter*; but that agrees not with all, nor alwayes: for there be some that are alwayes greene.

Maxime. *Where soeuer a difference is, there also is the Species, and the propertie most-proper.* For these ever goe all together.

The

## The sixth Chapter.

### *Of the Accident.*

BY Accident in this place, we doe not vnderstand whatsoever is in the world, Substance excepted. For Accident so taken at large comprehendeth also the Proper, and is of no vse to frame a Discourse or Argument.

But by Accident we vnderstand the mutable, or separable circumstances of a Subject, which may be, or not be in a Subject, without destroying the said Subject. As, *whitenes* in a wall, and *valour* in a man are accidents, which may be or may not be in a wall, or in a man, and that without destroying either man or wall, or causing them to be more or lesse man or wall.

Of these Accidents compared together, some goe before, and precede by order of nature the thing which wee intend to proue. Others doe accompanie the same. And others doe follow it.

it. The first are called Antecedents. As, *wearisomnesse, and shaking before an Ague; the foaming of the Sea before a tempest; the dawning of the day before the day*: The second are called Concomitants, that is to say, accompanying, because they goe together, As, *Pride and folly; The Eclipse of the Moone, and the full Moone*: The third are called Consequents. As, *raine, after a red morning; an ague after distast and wearisomnesse without former labour*.

Antecedents and Concomitants are vsed to proue probably that a thing is, or shall be. As, by *paleneſſe* we argue feare: and by *blushing* shamefastnesse, or the touch of conscience: and by *blunt hornes of the Moone*, we conclude that we shall haue raine: and by *the rednes of the same*, that wee shall haue winde.

But those proofes are most forcible that are drawne from subsequent accidents, which cannot be vnles some other thing hath gone before. As, we know there hath beene a battell *by*

*many*

*many slaine bodies lying in a field*; and shipwracke *by many plankes floating on the Sea.*

The Maximes are.

Maximes.

1. *The Antecedent being granted, the Consequent doth probably follow.*

2. *The Consequent being granted, the Antecedent must needs have gone before.* Especially when it is such an Effect as cannot be produced, but by one cause: As we proue, that because *it is day*, the Sunne is risen. But if it be an Effect, which may arise from divers Causes (As, *the corruptions of an Estate*; and *Agues*) the proofe is not necessary.

## The seventh Chapter.

### *Of the Whole and Parts.*

THe Whole is that which hath all the Parts joyned together in a convenient order and situation. As, the whole and entire of *a house* is not onely when all the parts are there, but when every part is conveniently placed. There

There be two ſorts of Whole: the one which may be divided into formall parts; the other into materiall parts.

The Formall parts are thoſe whereof the Definition is compounded. As, the Genus and the Difference are the parts of a Definition. So *animal* and *reaſon* be the two formall parts of a man. So the formall parts of a houſe, or of an image of ſtone, are *their matter and their externall formes or figures.* Such parts may eaſily be diſcerned and diſtinguiſhed by our vnderſtanding, but cannot be really ſeparated.

The Materiall parts are thoſe which differ in Situation, and which for the moſt part may really be ſeparated. As the materiall parts of the world are *the heavens* and *the foure Elements:* the materiall parts of a houſe are *the foundation, the walles,* and *the roofe.*

Every materiall part hath a ſituation by it ſelfe, except there be a mingling or commixtion of the ſaid parts. As when *wine is mingled with water,* or when *the foure Elements are mingled*

*gled in a Bodie.* Materiall parts are either alike among themselues (As, *the parts of water, Bloud, Butter, Oile:*) or els are vnlike, as, *the parts of a mans bodie*, or *of a house.* The parts alike among themselues haue no certaine number; because they may be infinitely divided.

The parts vnlike are either Integrals, or not Integrals.

The Integrall parts are those whereof the whole is immediately compounded. As, *a Kingdome* is immediately compounded *of a King* & the *three estates. The world* is compounded *of the heavens* and *the foure Elements. An animal* is compounded of *a bodie* and *a soule.*

But vnder one of these parts are oftentimes contained other little parts which are not Integrals: that is to say, whereof the Whole or the Entire is not immediately compounded. Among which there are some that are not necessary, serving rather for ornament and conveniencie, then for necessitie. As, in a Common-wealth,

*hunters,*

*hunters, perfumers, musicians,* and *Poets.* In a house, *shuts to windowes, gutters,* and *weathercockes.*

Sometimes in a Common-wealth the more necessary parts are such as appeare least, and are lesse in account then such as are for ornament or pleasure. As *Bakers* are lesse in account then Cookes, and *Plowmen* lesse then Goldsmiths.

There are little parts and not Integrall, which are notwithstanding principals, and altogether necessary. As, the *heart* and *braine* in man. A *vault* hath that propertie, that all the parts how little soever they be, are principals; because if one of them be taken away, the rest fall to the ground.

There are certaine parts which are not necessary for the being, and yet are necessary for the well and commodious being. As, *the eye* in a mans bodie, *lockes* in a house, *Merchant-drapers* in a towne.

The *Nayles* are part of mans bodie, as also the *teeth*: but *haire* is not. For it is an excrement. A

*A small quantitie of our blood* is not accounted a part of the bodie, because though it be taken away, the bodie remaines compleat, and oftentimes is the more healthfull. But the *whole masse of blood* is part of the bodie.

Now to argue and seeke the truth by the helpe of the Whole and Parts, these Maximes are to be vnderstood.

Maximes.

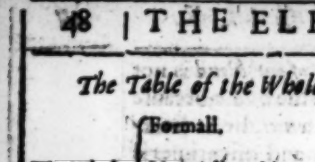
1. *Wheresoever the Whole is, there also all the Integrall parts requisit to being, must necessarily be.* As, where *man* is, there necessarily is *the bodie* and *soule*.

2. *Take away any of the Integrall and necessarie parts, and you destroy the Whole.* As, take away the *foundation* or *walls*, and you destroy the *house*.

3. *Whatsoever is said of the Whole compounded of parts alike, may be said also of every severall part.* Except that which is said of *the Whole, as it is Whole*, namely, *to containe all the parts*. For example, to be salt is said of *the whole Sea*, and of *every part of it*; but *to incompasse the earth*, is attributed onely to the Sea, as it is *a Whole*: and therefore it is not attributed to any part of the Sea.

*The*

*The Table of the Whole and Parts.*




## The eight Chapter.

### *Of Definition.*

DEfinition is a ſpeech which expreſſeth the eſſence of the thing. The perfect definition of a Subſtance is that, which is compounded of the next Genus and the ſpecificall difference. As, the definition of *a Plant* is, to be *a bodie living a vegetative life*: of *man*, to be *a reaſonable creature*. There are but few ſuch Definitions; becauſe the formes and eſſentiall differences of ſubſtances are not ſo well knowne vnto vs. God onely who made

made them, doth exactly know them.

The perfect definition of an Accident is compounded of three parts, namely, of the next Genus, of the proper Subject, and of the next Efficient or Finall cause. As for example, *death* is an accident, whereof the Genus is, *the end or destruction of life*, the Subject is, *a living bodie*, and the next Efficient cause is, *the extinguishing of vitall heat*.

This therefore is the perfect definition of *death*, namely, that it is *the destruction of the life of a living bodie by extinguishing the vitall heat*. Thus are defined anger, griefe, sicknes, thunder, earthquake, the Eclipse of the Moone, and that of the Sunne, Civil-warre, respiration, and divers other things, whereof wee shall produce some examples in the end of this Chapter.

Now but Proper Accidents can be thus defined. For mutable and casuall Accidents, or such as haue no certaine knowne cause, or that depend vpon the will of man, cannot be ex-

actly defined. And therefore in ſtead of a Definition, we deſcribe them, as well as we may, expreſſing their Genus, and ſome certaine propertie. So *whitenes* is defined, when we ſay, that it is *a moſt ſimple and moſt cleare colour*. And *light* is defined to be *the chiefe of all whitenesſes*; or, *the whitenes of the bodie of the Sunne ſending forth his likenes through tranſparent bodies*.

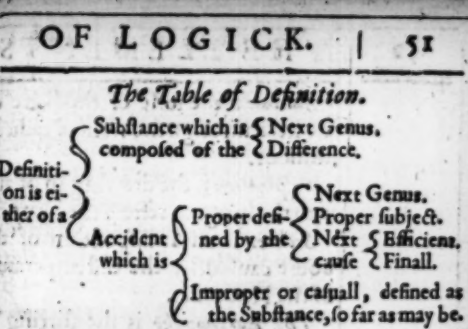
Naturall inſtruments, as, *the eye*, and *the hand*; or, artificiall, as, *a hammer*, or *ana xe*, are defined by their Genus, and by their fitnes for that vſe for which they are ordained. So *the Eye is the inſtrument of ſeeing*, and *a Hammer is an inſtrument to knocke withall*.

Definition ſerveth to diſcourſe and to argue by the meanes of this Maxime.

Maxime. *To whatſoever thing the definition agreeth, vnto that ſame alſo the thing defined doth agree.* And reciprocally, *to whatſoever the defined thing agreeth, to the ſame the definition agreeth alſo.*

The

*The Table of Definition.*




*Certaine examples of the definition of a Proper Accident.*

*Thunder* is a sound in the cloud, by the breaking out of a flaming exhalation.

*Death* is the destruction of a living creature by extinguishing the vitall heat.

*The Eclipse of the Moone* is the darkning of the Moone by the interposition of the earth.

*Anger* is a perturbation of the mind arising from the opinion of a sustained wrong.

*Civill warre* is the trouble of an Estate arising from the discord of the parties.

*Baldnes* is the losse of the haire of the head through the want of radicall humour.

*Respiration* is the drawing in of aire into the lungs to refresh the heart.

*Sickues* is an Indisposition of the bodie caused by the distemperature of the Humours.

*The Earthquake* is the stirring or moving of a part of the earth through the violence of winds therein enclosed.

*Blindnes* is a privation of sight in the eye by the corruption of the instruments of seeing.

*Sorrow* is a griefe in the irascible facultie, through the griefe of some evill.

*The Eclipse of the Sunne* is the darkning of the aire by the interposition of the Moone.

## The ninth Chapter.

### *Of Division.*

THere are divers sorts of Divisions. For either we divide the Genus

nus into the Species, or the Whole into the Parts, or the Substance into divers Accidents, or an Accident into divers Subjects, or a Word into divers significations.

1. First we divide a Genus into the Species. As, *a living creature* into *man* and *beast*. *Actions* into *naturall* and *voluntarie*.

2. Or els we divide the Whole into Parts. So *man* is divided into *Soule* and *bodie*. *A house* into the *foundations*, *walls* and *roofe*. Which division is made either in thought or in deed.

3. Or els we divide the Subject into divers Accidents. As, when we divide *men* into *free* and *bond*, into *males* or *females*, into *fooles* or *wisemen*.

4. Or els we divide an Accident into other Accidents. As, when we divide *Physicians* into *rich* and *poore ones*: *soulders* into *great* or *little ones*, strong or weake.

5. Or els we divide Accidents into divers Subjects, As, *sicknes*, into the sicknes of *the bodie*, and sicknes of *the soule*. So we may divide *corruption* in-

to the corruption of *simple bodies*, or into the corruption of *mixt or compounded bodies*.

6. Or we divide an Æquivocall word into divers significatiõs, As the word, *linke*, which signifieth *a Sausage*, *a Torch*, and *a linke of a chaine*.

Rules for Division.

1. A good division must haue but few parts, and those opposit, if it may be. As *animal* is divided into *reasonable* and *unreasonable*; *Number* into *even* and *odd*; *A line* into *straight* and *crooked*. But that is not alwayes possible. As when we divide the *externall senses* into *fiue*. And *France* into *seuenteene governements*.

2. In a Division nothing must be either superfluous, or wanting. As, if a man should say, that *the senses* are, *hearing*, *seeing*, *smelling*, and the *two eyes*; there were in such a Division something wanting and something superfluous.

3. The parts of a Division must not over-reach one another. As, who should say that *all cloathing* of the bodie is either *garments*, or *habillements*, or

or *gownes*. Or that *Iustice* consisteth in three things, *to liue honestly, to hurt no bodie, to giue every man his owne*. In these diuisions the parts are but little or not at all differing, and are in a manner the same thing.

*The Table of Diuision.*

Diuision is of the
- Genus into the Species.
- Whole into the Parts.
- Subject into Accidents.
- Accidents into divers Subjects.
- Æquivocall word into divers significations.

## The tenth Chapter.

### *Of things Coupled, called in Latin* Conjugata.

COupling is considered either in Words or in Things.

Words coupled or conjoyned are such, as come from the same beginning, and differ in termination. As, *iust, iustice, iustly: white, whiting, to white, whitenes*. The linke and affinitie of which words is grounded vp-

on some affinitie which is in the nature of the things signified by these words.

But there are certaine things coupled in Nature which are not coupled in Words. As *the sleepe*, and *to slumber*.

There are also certain words coupled, which notwithstanding for matter are not of necessitie linked together. As, *buckle* and *a buckler*.

Now for argument and discourse, the coupling and affinitie which is in words is of no vse, except there be also affinitie in the thing: but where the affinitie of words proceeds from the affinitie in the thing, we vse this Maxime.

Maxime. *To whomsoever one of the Coniugates or things coupled doth belong, the others also belong vnto the same.* As, *he that lyeth is a lyar.* And, *to whomsoever it belongeth to doe a iust thing, to him also belongeth iustice, and to liue iustly.* And, *seeing thou art a knaue, thou must be giuen vnto knauery.*

This Maxime is not without Ex-

ception. As, may appeare by the example of *Cambyſes*, who being very vnjuſt, did notwithſtanding ſome juſt actions. As in that he covered the ſeat of juſtice with the skinne of an vnjuſt Iudge, whom he cauſed to be ſlead, as a warning to all that ſhould ſit vpon the ſaid ſeat. And ſo there may be a Prince, loving treaſon, who notwithſtanding hateth the traitour.

## The eleventh Chapter.

### *Of Cauſes and Effects.*

A Cauſe is that which bringeth forth an Effect: or that by which or for which any thing is.

There be foure kinds of Cauſes: the Materiall, the Formall, the Efficient, and the Finall. For example, *the matter* of a houſe is ſtones, wood, and tyles: *the forme* is the ſtructure and manner of building, which ariſeth from the placing or ordering of the parts: *the efficient cauſe* is the Maſter-builder: *the finall cauſe* is for dwelling or habitation. The

The efficient and finall causes are called *External*, because they are out of the thing, and are not parts of it. As the builder is no part of the house: for suppose the builder were shut vp in the house, which he hath built, yet were he still an externall cause, by reason that he is not of the essence or definition of the house, nor any part of it. But the matter and forme are *Internal* causes, because the thing is composed of them.

The cause Materiall.

Matter is that whereof the thing is composed. As, *leather* is the matter of a shoe, because a shoe is made of leather.

Matter is of two sorts: the one is called matter of Generation, as, *the seed* is the matter of the Generation of a tree; *slime* is the matter of the Generation of frogs; so *water* is the matter of ice. The other is the matter of Composition. As, *the foure elements* are the matter wherof a bodie is composed; *wood and stone* are the matter of a house.

Sometimes matter is taken improperly

perly for the subiect whereof we speake or write. Thus *battails* and *loue* are the matter of the booke of *Arioſt*. And ſometimes for the occaſion and ſubiect whereabout man doth labour and occupie himſelfe. As, *numbers* are the matter of an Arithmetician, and *dangers* and *troubles* are the matter of proweſſe and patience.

Forme is that which giueth being to a thing. Formall.

Of Formes ſome are Naturall. As the forme of an Animal is *the ſenſitiue ſoule*: and the forme of the eye is *the faculti of ſeeing*: Others are Artificiall. As the forme of a ſtatua, of a houſe, or of a clock.

Naturall formes are part of the ſubſtance, and are multiplied by generation. But Artificiall formes are qualities, and no parts of the ſubſtance, neither are they multiplied by generation or propagation. If we engraue the image of *Ceſar* vpon a nut, that nut being planted will bring forth fruit and nuts, but not the image of *Ceſar*. And thence it is that children are

are not heires of the learning or piety of their fathers.

Efficient. The Efficient cause is that by which a thing is. As *the Sunne* is the efficient cause of the day: and *the fire* of burning: and *sickues* of death: and *the interposition of the Moone*, the cause of the eclipse of the Sunne.

Vnder the Efficient cause we comprehend the cause which is called Meritorious. As *murther* is the cause of punishment.

Likewise vnder the Efficient cause we comprehend the cause which is called Defective. As *the want of sight* is the cause of going astray; and *the absence of the Sunne*, is the cause of night, howsoever by nature it be the cause of day.

All instruments, both naturall, as, *the eye* and *the hand*; and artificiall, as, *an Axe* and *a sword*, are in some sort Efficient causes. For though they act not by their owne proper power, yet they helpe the action; and without them the naturall action would either be weake or altogether hindered.

The

Finall.

The Finall cause is that for the which a thing is done. So the end of Physick is *to heale the sick*, and the end of Studie is *to get learning*.

We must warily distinguish *the scope* from *the end*. As, the scope of walking is *health*, but the end is the *last step*; the one is the end of the intention; the other the end of progression.

The finall cause may also be the formall and efficient cause; but in divers respects. As, the forme of the house is the end of the builder: and the forme of a horse engendred is the efficient cause of the operations of the same horse, and also the finall cause of the horse engendring. And that which is the final cause, is commonly an effect. As *to see* is the finall cause, and also the effect of sight.

Of causes the finall is the best, and most excellent: because all the other tend vnto it, and serue it.

The finall cause as it is the last in execution, so it is the first in the intention.

Efficient and finall causes bring forth

Causes of themselues, or by accident.

forth their effects, either of themselues and of their owne nature; or by accident. Thus the Sunne *giueth light* of it selfe, and of his owne nature; but by accident *it blindeth Owles*. And *the neighing of Darius his horse* was the accidentall cause of his raise to the kingdome. And *thirst* may be an accidentall cause to saue a man out of the battaile; if being thirstie and gone out of the armie to drinke, it so happened that whilest he was a drinking, the armie was suddenly discomfited. So a Musician that buildeth a house, is not the cause of the building as he is a Musician, but as he is an architect or builder. It is the same of the finall cause. For example, *healing* is the proper end of Physick, but *the gaine* of the Physician is an accidentall end: the one is the end of the Art, and the other of the person.

Causes next or remote.

Againe, there be some next, and some remote causes. For example, the next end of the art of a souldier is *warre*, and the remote is *victory*, and the end more remote is *a happie peace*.

So

So the next efficient cauſe of death is *ſickneſs*, of ſicknes *exceſſe*, and of exceſſe *bad company*.

The ſame may be ſaid of formes and matters. The next matter of a Table is *the wood*, but the remote matter are *the foure Elements*. The next forme of any thing is that which wee call *Specificall*; but the remote formes are thoſe of the next or of the remote *Genus*. So the next forme of a man is *to be reaſonable*, but *to haue ſenſe* is the forme of a liuing creature, which is the Genus of man, and by conſequent alſo is the forme of man, but remote.

Cauſes ſufficient, or not ſufficient.

Moreover, there be cauſes, which are Sufficient of themſelues to produce an effect. As, *the Sunne* is of it ſelfe ſufficient *to giue light*, and *fire to burne*, and *the fauour of God to make a man happie*. But there are ſome cauſes, which are not of themſelues Sufficient, & muſt haue many together. As, *to make a fertile* ſoile, the ground muſt be luſtie, it muſt be well tilled, raine muſt moiſten it, and the Sunne muſt

must heat it in due season, and moderately. *To attaine vnto learning*, a man must haue a good wit, good instructions, and be diligent and painefull. So divers things are the causes *of victory*, experience in the Generall, valour in the Souldiers, military Discipline, necessary weapons, &c. but aboue all the will of God.

Now to argue from the causes and effects, these Maximes are of vse.

Maximes.

1. *That which agreeth with the matter, agreeth also probably with the thing composed of that matter.* As, the earth is heavie, and therefore terrestriall bodies are heavie. This Maxime is sometimes faultie. For example, Ice is hard, yet notwithstanding the matter of it is soft and liquid, namely, water.

2. *Where the matter is wanting, there also the thing composed is wanting.* As, where there is no iron, a sword cannot be made.

3. *The next efficient and necessary cause being granted, or denied, the effect also must be granted, or denied.* As, if the Sunne shine, it is day, if it shines not, it

it is not day. And this effect being granted, the efficient cause is also granted.

4. *When divers causes are necessarily requisit to produce an effect, one of the same causes being wanting, the effect also is wanting.*

5. *Such as is the efficient cause, such commonly are the effects.* As of wicked Fathers, come wicked Sonnes: and strong things beget strong things; and *Moores* haue blacke sonnes. This Maxime is often false, especially in remote and vniversall causes. As the Sunne groweth not, and yet it causeth plants to grow, it hath no sent, and yet causeth flowres to smell sweet, and carions to stinke. And God mooveth all, but yet is immoovable. Also in causes which act by accident. As a Whetstone is not sharpe, yet causeth sharpenesse: the Sunne is not hot, yet warmeth by accident, in clearing and purifying the ayre by the reflection of his beames.

6. *If the selfe same qualitie be attributed vnto the agent and vnto the pati-*

*ent, it muſt much more be attributed vnto the agent.* As, the hand is warme by reaſon of the fire which acteth vpon it, therefore the fire is hotter then the hand. And the Sunne cauſeth the water to ſhine, therefore it is brighter then the water.

This Maxime is falſe in the fourth ſpecies of qualitie, namely, in the forme and figure; becauſe this qualitie receiues neither more nor leſſe. As, if the Seale be round, it followeth not that the figure printed in the waxe be leſſe round, then the Seale.

7. *The end being granted, thoſe meanes alſo without which the end cannot be attained vnto, are likewiſe granted.* As, if you grant that a man liveth, you grant alſo that he eats, drinkes, and breaths. And happineſſe being granted, vertue, and the fauour of God are likewiſe granted.

8. *The meanes to attaine vnto the end being granted, it followeth not that the end muſt therefore alwayes be granted.* For it is no good reaſon to ſay, *Philip* hath bookes, therefore he is lear-

learned: he hath horſes and weapons, therefore he ſhall obtaine the victory. So alſo, *the end being taken away, the meanes are not alwayes therefore taken away.* For many, though they haue the meanes in their hands, never attaine vnto the end.

9. *Cauſes by chance or hazard are not fit to argue withall.*

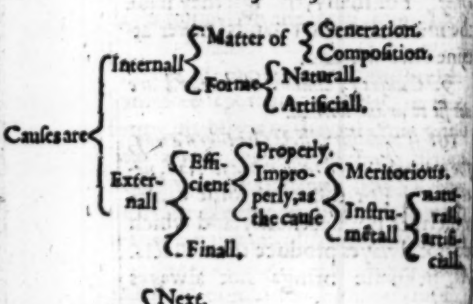
10. *If neceſſary effects be taken away, the cauſes alſo are taken away.* I ſay, *neceſſarie*; For there are ſome cauſes which act not neceſſarily, and which do not alwayes produce their effects. As, ſickneſſe brings not alwayes death.

11. *Cauſes are more excellent then their effects, vnleſſe the effect be a finall cauſe.* And therefore, to ſee, and heare, are things more excellent, then the faculties of ſeeing, and hearing; becauſe thoſe faculties are ordained onely for theſe effects, namely, to ſee, and to heare.

12. *The cauſes euer goe before their effects in the order of nature, but not alwayes in time.* Thus the Sun-beames

are as ancient as the Sunne; and the flame is never without clearenesse or brightnesse.

*The Table of Causes.*




The

## The twelfth Chapter.

### *Of Etymologie.*

ETymologie is the derivation of a word.

Etymologie in regard of the word, is as a Definition in regard of the thing; and serveth to argue and discourse. As when we say, *Such a one is not a Counsellour*, because *he gives no Counsell.* And *Philip cannot be called a Philosopher*, because *he loues not wisedome.*

Thus by the Etymologie of these names *Iesus* and *Christ*, wee gather what our Saviours calling and office is. And wee encourage such as haue a name importing some vertue, in stirring them vp to vertue by the Etymologie of their names. So *Eusebius* and *Pius* may be exhorted *to Pietie*, and *Andrew to valour*, and *Celestinus to give himselfe to heavenly things*, least they belie their names by a contrary conversation. And so one ga-

thereth probably, that all things in times past were common, the Rob excepted, because when a theft is committed, we vse to say, Such a one hath beene *robbed*: and that the first Warres were against Beasts, because the Latin word *Bellum*, cōmeth from *Bellua*. But these kinde of proofes are very weake, because names are given vnto men, before it can be knowne whether they will be vertuous or no; nay, sometimes names are given by contraries, and by way of derision. As, when *a dwarfe* is called *a Goliah*.

Good Etymologies in the English tongue, are for the most part taken from the Latin; but such as are drawne from the English tongue are commonly absurd and ridiculous. For example, if a man should say, that *the woman is the woe of the man*; and *beere, quasi, be heere*,

The

## The thirteenth Chapter.

### *Of things alike or vnlike.*

THose things are called Alike which haue between them some Analogie and correſpondencie or proportion.

The analogie is knowne by the end and vſe. As *the Shepheard in regard of his flocke*, and *the Paſtor in regard of his Church*, are things Alike.

There be certain things differing, which the vulgar take for the ſame things, and none but Philoſophers doe diſtinguiſh them. As, loue and friendſhip; continencie and temperance; the flatterer and the man-pleaſer; memory and remembrance; chance and fortune; hate and envie; whoſe differences are learned by the Ethicks and Phyſicks.

Similitudes are rather ornaments of a ſpeech, then any proofes. As, when we ſay, Even as cracks in a veſſell are knowne when the veſſell is

filled with liquor: So the secret vices of the heart are discovered by plentie and prosperitie. And, that Hypocrites are like vnto Bees which haue hony in the mouth, and a sting in the tayle. And that covetous persons are like vnto Christmas-boxes, out of the which money cannot be gotten before they be broken. And false friends are like vnto Swallowes, that depart from vs in hard weather.

Metaphors well drawne are similitudes reduced to one word. As when we say, to feed the flocke, that is, to teach: and to staine ones reputation, that is to say, to backbite.

Similitudes haue two parts, the proposition and the reddition. The proposition, namely this, *euen as swallowes*, &c. The reddition as this; *So false friends*, &c.

Examples are taken from things done, and from humane actions: but Similitudes are oftentimes drawne from things fained, and from that which is obserued in nature.

Now to argue from the like, wee vse

vse this probable Maxime. *To things alike agree things alike.* Maxime.

## Examples Of Analogie.

### *The Analogie between an Animal and a Plant.*

| In an Animal, | In a Plant. |
|---|---|
| The skinne | The barke or rinde. |
| The heart | The pith or marrowe. |
| The armes | The branches |
| The mouth | The roote. |
| The excrements | The leaues and gumme. |
| The veines | The graine of the wood. |

### *The Analogie between mans bodie, and a Common-wealth, or Estate.*

| In Man, | In an Estate. |
|---|---|
| The head | The Prince. |
| The eye | The Councell. |
| The armes | The souldiers and tradsmen. |
| The belly | The idle persons. |
| The sinewes | The money. |
| The joynts | Concord and good order. |

The

*The Analogie between a building and a mans bodie.*

| In a building, | In Mans bodie. |
|---|---|
| The kitchin | The belly. |
| The kitchin knives | The teeth. |
| The studie | The braine. |
| The windowes | The eyes. |
| The fiue dores | The fiue instruments of the senses. |
| The Master of the house | The soule. |
| The sinke | The conduits of the excrements. |

*The Analogie between the indispositions of the Bodie and of the Soule.*

| In the Bodie, | In the Soule. |
|---|---|
| Blindnes | Ignorance. |
| Paine | Griefe |
| The dropsie | Covetousnesse. |
| The itch | Impatience. |
| Swelling | Pride. |
| A fit of an ague | Choler. |
| Shaking | Feare. |
| Contagious aire | Bad examples. |
| Painting | Hypocrisie. |
| Collicks | Troubles of conscience. |
| Weakenesse | Pusillanimitie. |

The

## The foureteenth Chapter.

### *Of things Oppoſite.*

OPpoſites are ſuch as cannot ſtand together in the ſame ſubject, at the ſame time, and in the ſame regard. As a man cannot be at the ſelfe ſame time *both white* and *blacke* in the ſame part of his bodie, and not compared to other things: though he may be blacke and white, in divers parts of his bodie, either at divers times, or comparatiuely, white in reſpect of a Moore, and blacke in reſpect of a Swan.

There are foure ſorts of Oppoſits. 1. Relatiues. 2. Contraries. 3. Priuatiues. 4. Contradictories.

1. Of Relatiues wee haue alreadie ſpoken. lib. 1. cap. 7. Relatiues.

2. Contraries are two qualities or two actions which being vnder the ſelfe ſame Genus, are moſt remote one from the other, and are incompatible. As *blacke* and *white* haue the ſame Contraries.

ſame Genus, namely, *colour*: *Vertue* and *vice* are ſpecieſes of *habits*, which being vnder the ſame Genus are of a contrarie nature.

Contraries are either Mediate or Immediate. Thus, there is a middle between black and white, namely, *pale* and *browne*: and between hot and cold there is *lukewarme*. But between the number *even* and *odd*, between *the ſtraight* and *crooked line*, there is no third. The middle or meane doth vſually participate of the two contrary extreames: the meane between good and bad actions excepted. For the meane is that which is called an *Indifferent action*, participating neither of good nor evill.

Between two contrary vices, vertue is the meane. As between *couetouſneſſe* and *prodigalitie*, there is *liberalitie, and good husbandrie*: between *raſhneſſe* and *cowardneſſe*, there is *valour*.

This mediocritie or meane participating of two extreames, is not in the vertue it ſelfe; for that hath no parti-

ci-

cipation with vice; but it is in those actions and things about which vertue is occupied. As, *to avoid danger*, and *to lay out money*. For these actions partly imitate the covetous man, and partly the liberall. And it fals out oftentimes that to each of the extreames there is a contrary vertue: as to prodigalitie, good husbandry; to *covetousnesse*, *liberalitie*: so *cowardnesse* and *rashnesse* are two extreames; and to *cowardnesse*, *valour* is contrary; and to *rashnesse*, *discretion*.

If two contraries happen to be vnder two next differing Genuses, (as, *iustice* vnder *vertue*, and *iniustice* vnder *vice*) these two Genuses must needs be contraries one to another, and Species of the same Genus. By this meanes all contraries, if they be not vnder the same next Genus, they are vnder the same remote Genus.

Words are sometimes wanting to expresse one of the contraries. Thus we haue no word to expresse the habit contrarie to *an ague*, nor to *a rheume*, nor to *the Physicks*, nor to *Grammar*.

3. Pri-

Privatiues.

3. Privatiue oppoſits are a qualitie, and the abſence and privation of that qualitie. As, *light* and *darkenes*; *ſight* and *blindneſſe*.

There can be no privation, when the ſubiect is not capable of the contrary qualitie. Thus in *a ſtone* there is no blindneſſe, becauſe it is not capable of ſight. And *a childe in the wombe* cannot be ſaid to be blind, nor *a whelp before it be nine daies old*, becauſe they are not come to that time wherin they ſhould ſee.

The privation of Actions may be remedied and recovered. As the privation of *the act of ſeeing* is recovered, when he that ſleepeth openeth his eyes to ſee. But the privation of the *Facultie of ſeeing* is irrecoverable.

*Knowledge* and *ignorance* ſimple and childiſh or brutiſh, are oppoſits privatiuely. But *wilfull ignorance* that armes it ſelfe with reaſons againſt the truth, is oppoſed vnto knowledge as a contrary, and not as a privation.

Contradictories.

4. Contradictories are ſuch betweene which there is no meane or mid-

middle. As, *to be*, and *not to be*; *man* and *no man*; *horſe* and *no horſe*. For there is nothing that is not either man or not man; horſe or not horſe.

Now when we will argue and proue any thing, Oppoſits are of great vſe. The Maximes are theſe.

Maximes.

1. *Whoſoeuer grants one of the relatiues, doth neceſſarily grant the other.* As he that calleth ſuch a one *a father*, affirmeth that he hath *a childe*.

2. *One and the ſame thing may be two relatiues*; As, to be *a father* and *ſonne*, *maſter* and *ſeruant*, *right* and *left*; but in divers reſpects.

3. *Contrary things haue a contrary conſequence.* As, vice makes a man wretched, therefore vertue maketh him happie. Here are excepted ſuch things as doe belong to the Genus of the two contraries. For if *blackneſſe* be viſible, it followeth not that *whiteneſſe* be inviſible; becauſe to be viſible, belongeth to the Genus of whiteneſſe and blackeneſſe, namely, to colour. We muſt alſo except ſuch cauſes as doe act by accident. As, if *a white*

*white man* buildeth his owne house, it followeth not, that *a black man* must pull downe his; and if *heat* doth harden the ground, it followeth not that *frost* must soften it.

4. *The selfe same cause may bring forth certaine effects, when the action of the cause dependeth from the disposition of the matter against which it acteth.* So the *Sunne* gines a sweet smell to flowers, but it makes a carrion stinke: and *fire* hardens the earth, and softens waxe.

5. *Every subiect that is capable to receiue the one of the contraries, is also capable to receiue the other.* Thus, whatsoever may be heated, may be cooled; and whatsoever may be hardned, may be softned.

6. *One of the contraries being granted, the other is ouerthrowne.* Thus, he that is not *free* is *a bondman.* But *it followeth not that if one of the contraries be denied, the other must be granted; except they be such contraries, as haue no meane between them.* As, if the bodie be not white, it followeth not that it is black.

But

But in contraries that are without meane, this consequent is good. As, if this line be not straight, it is crooked.

7. *Of two good things whereof the one is lesser and the other greater, the contrary to the greatest good is the greater evill.* As, vertue and health be two good things; if vertue therefore be a greater good then health, vice must be a greater evill then sickneſſe.

*Except* when one of the two good things is compriſed in the other. As, to haue the skill of reading, and the skill of Philoſophie. For though the skill of Philoſophy be a greater good, then the skill of reading, yet it followeth not, that not to be skilfull in Philoſophie is a greater evill, then not to be skilfull in reading, becauſe the skill of reading is comprehended vnder the skill of Philoſophie.

8. *Contradictories cannot ſtand together, and one of them muſt of neceſſity be.* As, there is nothing that is not either man or not man; and it is impoſſible to be both the one and the other, at the ſame time.

## The fifteenth Chapter.

### *Compariſon of things.*

THings are oft compared according to their goodneſſe and excellency, and then the compariſon is made by theſe Rules or Maximes.

Maximes.

1. *Whatſoever is deſired in regard of itſelfe, is better then that which is deſired onely in regard of ſome other thing.* As, *life* is better then *money*, and *ſight* is more to be deſired then *ſpectacles*, and *health* then *Phyſick*.

2. *That which is good to all, is better then that which is onely good to ſome, and which is vſed but ſeldome, and for certaine reſpects.* Thus *light* is better then *darkneſſe*, and *to haue two armes* is better then *to be maimed*. For darkneſſe is of vſe onely for theeues, and debauched perſons; and to haue but one arme is of vſe onely to beggars, who thereby ſet forth their miſery.

3. *That which is good of it owne nature, is better then that which is good onely*

onely by accident, or which is of vse onely to avoyd a greater evill. Thus, *health* is better then *Physick*; and *to have our wares in our ships* is better then *to cast them into the Sea*; and *prudence* is better then *chance*.

4. *One good which when we have, wee need not the other, is better then that, which when we have, we have yet need of the other.* Thus to be loved of *God*, is better then to be loved of *men*; and to haue the perfect knowledge of an Art, is better then to haue it written in a booke.

5. *Of finall causes, the last is ever the best.* Thus happinesse is better then vertue, and the skill of managing a horse, is better then the skill to make a spurre.

6. *Permanent goods are better then the transitory.* As, vertue is better then money.

But in generall without any respect to the goodnesse or excellency of things, they may be compared by these Maximes following.

1. *That which is such of it owne na-* Other Maximes.

*ture, is more such then that which is onely such by participation.* Thus the Sunne is cleerer then a looking glasse, when the Sunne shineth on it.

2. *That which is such of it selfe, is more such then that which is such onely by accident.* As, exercise and good nourishment is more healthfull, then the cutting off of an arme: and the death of the Sonne of God hath beene more beneficiall to salvation, then the treason of *Iudas*, howsoever God vsed it as a meanes for our good.

3. *That which is most remote from his contrary, is more such then that which is lesse remote.* And therefore the cold in *Norway* is greater then that in *Italy*, because it is more remote from the South, from whence the heat commeth.

4. *That which acteth more forcibly, is commonly more such, then that which acteth more weakely.* As, that which hurteth more is worse then that, which hurteth lesse, and that which pricketh more is sharper pointed, then that which pricketh lesse. This rule

rule hath exceptions. Aire and water are equally moist, nay, *Aristotle* holds the aire to be moister; yet water moistens more then aire. So the flame is hot, or rather hotter then the hot iron, and yet a hot iron burneth more then the flame doth.

## The sixteenth Chapter.

### *Comparison of Probabilitie or Likelihood.*

THings are compared in probabilitie, when we question whether of the two is the more credible. And this is done, when to proue some one thing, wee bring in another equally, or more, or lesse probable, then that which is in question.

This comparison may bee made three manner of wayes. For

1. Probable alike.

First when we will proue a thing in question, we may bring in another thing as probable as it. For example, if a Prince hath granted something to one Citizen, another Citizen may

pretend, that the like grant ought to be made vnto him also; because he is a Citizen as well as the other, and nothing inferiour to him. So a fault which is pardoned to some one in regard of his youth, must be pardoned to another as young as he. This reason is grounded vpon this Maxime.

Maxime.

*Of two things equally probable, or equally iust, the one being granted, makes the other to be easily beleeued.*

2. More probable.

Secondly, to proue a thing in question, wee may bring another thing more probable then it, arguing thus. If that which is more probable is not, much lesse shall that be, which is lesse probable. For example, if a Father will not haue his children goe richly apparelled, much lesse will he suffer it in his seruants. And if the Apostles were not without sinne, how much lesse are wee; This is called arguing from a more probable to a lesse, and grounded vpon this Maxime.

Maxime.

*If that which is more possible, and more probable be not; much lesse shall that be which is lesse probable and possible.*

The

The conclusion of such arguments must alwayes be negatiue.

3. Lesse probable.

Lastly, we may proue a thing in question, by bringing in another thing that is lesse probable, saying thus: If a thing lesse probable, and harder to be beleeued, is notwithstanding, or hath beene; much more ought we to beleeue, that which is more probable and easier to be done. So if one at twelue yeares of age can carry a waight of a hundred pound; by a stronger reason one may carry the same weight at the age of twentie yeares. And if *Alexander* tooke *Tyre*, much more easily might he haue taken *Ierusalem*, which was weaker then *Tyre*, if he had besieged it. This is called arguing from the lesse probable to the greater, grounded vpon this Maxime.

Maxime.

*If that which is lesse probable and lesse possible may be, much more shall that be, which is more probable and more possible.* The conclusion of such arguments must alwaies be affirmatiue.

Wee must warily distinguish be-

tween the greatneſſe of the *thing*, and the greatneſſe of the *probabilitie*. For greateſt things are oft leſſe probable, and more difficult. For it were no good argument to ſay thus. If birds can flie, how much more bulls. And if a threed can goe through the eie of a needle, how much more a cable. And if *Michael Angell* could paint very excellently, how much more the Emperour *Charles* the fift.

## The ſeventeenth Chapter.

### *Of Teſtimony.*

TEſtimonies are often vſed to argue and proue a thing.

Teſtimonies are of force and doe perſwade, when they be ſuch as may not be denied, by reaſon of the qualitie, authoritie, ſufficiencie, or multitude of perſons.

Teſtimonies are either divine or humane.

Divine teſtimonies are Oracles, and all that is called the Word of God: likewiſe

likewise dreames, visions, miracles, be they true or false, if they be delivered as true. Also rules to liue well, derived from nature.

Humane testimonies, if the question be about matter of right, are humane lawes, customes, the testimonies of Ancestours, or such as are skilfull in their owne art, the consent of nations. But if the question be of fact, then are to be produced schedules, acquittances, confessions, eye or eare witnesses.

*Such witnesses, as doe not affirme or deuie a thing to be or not to be, are of no force.* For there is a great difference between these two sayings; *God saith not that such a thing is*, and *God saith that such a thing is not.* The latter is a good proofe, but the former hath no consequence or sequel. And likewise this proofe is of no effect: *Aristotle hath not said so, therefore it is not so.* Or, *the Word of God saith not that man is a reasonable creature*, and therefore *man is not a reasonable creature.* Maxime.

Notwithstanding, *if it be a thing which*

*which cannot be knowne, but by the testimonie of one alone, then this kinde of arguing is good and firme.* Such a one said not so, and therefore you cannot maintaine that it is so. For example, if we had no knowledge of *China* but by the report of one man onely; whosoever would affirme any thing without the warrant of such a one, without question would be prooved a lyar; or if he spake the truth it were but by chance, and not knowing himselfe whether he spake true or no. So likewise seeing that nothing that is necessary to salvation can be knowne without warrant from the Word of God; whosoever in things necessarie to salvation, affirmeth any thing not contained in the said word of GOD, ought not to be beleeved, & affirmes that which he knowes not.

The

## The eighteenth Chapter.

### *Of the vse or Practice of the precedent Doctrine.*

THis Doctrine contained in the sixteene precedent Chapters is called the doctrine of Places; because it shewes the places whence matter is drawne for argument and furniture for proofes. For example, if wee vndertake to proue, that, *Death is not to be feared of a vertuous man*, wee must runne over these sixteene places, and take notice of such as will best furnish vs with matter. To make this plaine we will runne over the said places, and apply them to this example.

The Genus of *Death.*

*Death is the end of mans life. Now the end is to be desired, when it is not only the end, but also the scope that wee must ayme at; such is death, vnto which a wise man ought to prepare himselfe every day, as being the end of his hope.*

The

## The difference.

*This death comes by the separation of the soule from the bodie, now wee must not feare the separation of such things, as being ioyned doe hurt one another: the soule consumeth the bodie with cares, like vnto a knife that cuts its sheath; the bodie is to the soule as a burden or a prison; God separateth them to reioyne them againe in a better estate and condition.*

## The Species.

*There be two kindes of death; the one naturall caused through age, the other violent, which happens by sickneſſe, or when a man is killed. Philosophers say that death which comes through age is without paine, because it is without combate or resistance; and who would liue when all his strength is spent? violent death is not also to be feared of a vertuous man, for what matter is it, whether I dye of an ague, or by the sword? Whether by the distemper of humors, or by the distemper & commotion of people? Whether I yeeld vp my soule by the mouth*

w by a wound, so it may go to God.

## The properties and accidents of Death.

*Death makes all alike, both great and small; It dismasketh and discovereth thoughts; then dissimulation hath no more place; The words of the dying are serious and of great weight, their prayers are fervent, their confession humble, their admonitions to their children are received with attention, the spirit of God comforteth them within, the Angels guard and assist them without, and Iesus Christ reacheth them out the crowne.*

## Of things conjoyned with Death.

*If we must not bewaile the dead, why should we then feare death?*

## The causes of Death.

*The efficient cause of death is the will of God, which wee were better to yeeld unto willingly then by compulsion; why should*

*should we resist Gods will, seeing it is iust and vnevitable? Againe, the law of nature vnder the which we are borne is the cause of death: plead not therefore against your owne hand writing. Wouldst thou haue the Lawes of the world changed for thee? The finall cause of death in regard of the world, is that we may giue place one to another; thy father hath giuen place to thee, giue thou place to thy children. The finall cause of death in regard of every vertuous man is to put an end to all his miseries, and to bring him home to God. For all these causes of death a vertuous man ought not to feare it.*

## Causes wherefore a thing ought not to be feared.

*A thing is not to be feared: first if it is vnevitable; secondly, if it hurteth not; thirdly, if it be profitable. Death hath in it these three things. For it is vnevitable; therefore as it is a folly to hope for things impossible, so it is a folly to feare things vnevitable. Againe, death is not hurt-*

hurtful because our Saviour Christ hath taken away the curse thereof. Lastly, it is profitable, and that is knowne by the effects which follow.

## The Effects.

Death is profitable before death, for it abateth pride. Thou seest now a triumphing Monarch, and ere long toads will breed in his skull, and wormes in his entrails. The thought of death keepes a man sure and sobriety, as also from sinning. Without it man would hardly be tamed. It makes vs despise the world, and to acknowledge the vanitie of all our toyle. It makes vs more earnest in prayer, and increaseth our faith through resistance. After death, it makes vs fully know that which we here see but a farre of, and very obscurely. It ioineth vs with the Saints and placeth vs with Christ Iesus. To some death is to offer wrong vnto Christ, as if it were ill being with him. It maketh vs to see the face of God, which changeth them that see it into his owne likenesse. It bringeth vs into the possession of peace without

*without end, of contentment without interruption, and felicitie without measure.*

## The Similitudes.

*If new borne babes had the vse of reason, they would never crie, but rather much reioyce that they part from such an vncleane and obscure place, to enter into the light of this world: So, if we had the right vse of reason, wee would not be sad when death comes, because our soules goe out of an vncleane, straight, and obscure place, or rather prison, to enter into the light of heaven. Death is like* Samsons *Lyon, whereof it is written, that from bitternesse came sweetnesse. Or like vnto the harsh sound of a boult at the opening of a doore, which notwithstanding is very pleasing, if it be to come out of a prison. Or as when Christ came to his Disciples walking on the waters, they said it was a spirit; but when they saw him neere hand, they said of him, and so must we of death, it is the Lord that commeth vnto vs.*

The

## The Opposits.

*Present life is opposed vnto death, vnto if there be no cause to desire life, no more is there to feare death. Vpon this occasion you may run through every age of mans life, as also through the divers conditions that are from the Prince to the beggar, and shew that all is but misery. Besides those evils and accidents which are common to all.*

## The Comparison in regard of Goodnesse.

*Mutable and transitorie things are not so good as those that are eternall and permanent. Againe, the good which sufficeth alone, is better then that good, which when we have, wee have yet need of another. He that hath happily ended his life, needeth neither money nor apparell, nor honour, nor health, &c. but he that hath nothing but the present life, hath need of all these things, and besides them eternall good things.*

## The Comparison in regard of Probabilitie.

Probable alike.

*If Martyrs feared not to dye in the flames of fire, why should we feare to dye in sickneſſe, seeing we haue the same hope?*

Leſſe probable.

*If the Heathen went to their death with as ioyfull a countenance, as others that returned safe from thence; why should wee feare it that haue a better hope? Why should ambition haue more force in them, then faith in vs? If a souldier doth aduenture himselfe vpon the mouth of the Cannon-shot, and offereth himselfe the first vpon a breach for the pay of six-pence a day; what should we doe for an euerlasting kingdome.*

## Testimonies.

*Here must be alledged the passages of the word of God, the sentences of Philosophers, the examples of such as haue dyed constantly; As, of* Regulus, *of the two* Decius, *of the* Gymnosophists, *of the* Indian *Women, of the* Tribals, *of the Martyrs, &c.*

Finally,

Finally, by these sixteene places, as by certaine directions, we are furnished with abundance of matter for argument and discourse. And by these helpes we are put in remembrance of all that we haue read, heard, or seene, which may serue to amplifie the matter propounded. But the Maximes which are added to every place, are of vse to teach vs how the argument may bee well grounded, for they are as lights vnto our reason. And note also, that these places furnish vs with matter to argue, as well for *Death*, which is the Subject of this question, as for *Not to be feared*, which is the Attribute thereof, as wee shall see hereafter. But the Arguments which are drawne from the attribute are the strongest and most forcible.

## ANOTHER EXAMPLE.

### The praise of Sobrietie.

The Species of Sobrietie.

*WE speake not heere of that Sobrietie which the Physicians appoint by ayet:*

*nor of that which is through necessitie, when we haue nothing to eat: nor of that cold gravitie of the Germans at the beginning of their meales: nor of that of couetous persons, who grudge themselues things necessarie: nor of that which is performed by a scrupulous abstinence. But of that which is a morall vertue.*

## The Definition.

*Sobrietie is a temperance, which prescribeth a moderation in eating and drinking.*

## The Whole and the Parts.

*Neither doe we speake of that Sobrietie which consisteth in certaine meates, and not in other, in eating and not in drinking, in his owne house and not in companie. For sobrietie giues lawes for all times, and all places, and for all sorts of meates and drinkes.*

## The Etymologie.

σωφροσύνη *The Grecians haue rightly derived sobrietie from a word which signifieth to keepe the vnderstanding sound, because it preserueth the health, and the libertie of the vnderstanding.* The

The Genus.

*I say it is a species of Temperance. Now Temperance is the nurse of all other vertues, the guardian of bodily health, and of the light of the minde, making it not to be subiect to the belly; it keepeth in brutall concupiscence, and teacheth how to eat to line, and not to line to eat.*

The causes.

*The cause why a thing is to be commended or desired is, if it be honest, delightfull, and profitable. Now sobrietie hath all these three; for it is a good and comely thing to haue an vpright body in old age, to haue a fresh and lively countenance, not to be seene drunke nor croaking in an Alehouse among debauched persons &c.*

*It is a delightfull thing to be cheerfull and affable, and to haue peace at home; for drunkennes breedeth quarrels. Pleasures seldome vsed are sweetest.*

*It is a profitable thing to haue a strong body, a free minde, fit to goe about civill affaires, to haue a good memorie, not to waste goods, to provide for the necessitie of*

the familie; to husband the time well, not to reveale secrets: sobrietie is of vse for all these.

## The Effects.

The causes for the which sobrietie is commendable, are also effects of sobrietie, and therefore we shall not need to repeat them.

## The Opposits.

Here a drunkard must be set forth in all his colours, his speech, his gesture, his countenance, his troubled mind, the gout accompanying it, the red and bleer'd eyes, the memory overthrowne, the understanding becometh more brutish, the leanest proceeding from excesse is worse then that which commeth of want. Add vnto these the shame and reproach, when as the diseases of old age are imputed to the excesse of youth, by such as will be readie to say; 'tis well bestowed, he hath not left his vices, but his vices haue left him. Againe, the good of the familie is wasted, time is miss-spent, the body and mind corrupted, quarrels are picked in drinking, and lasciuious desires are stirred vp, a man becomes a babler disclosing his most hid-

den

*den secrets. It is a bottomles gulfe, for a little will content nature, but a greedie desire hath no end. Intemperance either kindles or discovers all manner of vices.*

## The causes of drunkennesse and gluttony.

*Bad company doth cause excesse: so doth the opinion of a false pleasure. For what pleasure is there to drinke without thirst, and to stirre vp an artificial hunger when the belly is full. Also vaine glory causeth excesse, when men will imagine it to be a thing praise-worthy to be able to hold more drinke then another; and yet such a man shall never hold so much drinke as a hogs-head; and though he haue a more capable bodie, he shall not therefore be accounted a man of greater capacitie.*

## Comparison in the Probabilitie.

*Seeing the very beasts do not overdrinke themselues, why should a man by his drunkennesse make himselfe worse then a beast? Shall the instinct in a beast be of greater force, then reason in a man?*

### Similitudes.

*A man cannot ſtudie neare a Kitchin; a drunkard is not fit for a Sentinell. God hath not made our bodies to be like Spunges, which are filled and then ſqueeſed out. Exceſſe in drinke kindles concupiſcence, as Oyle powred on a fire.*

### Teſtimonies.

*Adde to theſe divine and humane teſtimonies. That God hath given man very long and revolved inteſtines, to the end that the meat being long in the paſſage, he ſhould not need to feed againe ſo ſoone. That God hath placed the braine farre from the belly, which is the Kitchin of the bodie. That the Lacedemonians would ſometimes make one of their ſlaues drunke, and point him to their children, to make this vice odious vnto them.*

All theſe things afford matter of argument: Of all theſe proofes ſome are more forcible then others. The force and ſoliditie of the proofes, is knowne by the helpe of the Maximes, which we haue added to every place.

# ¶ The third Booke.

## Of Enuntiation.

### The first Chapter.

*What an Enuntiation is, and the parts thereof.*

THE places or helpes of invention contained in the sixteene precedent Chapters, afford vnto vs abundant matter for proofes and arguments. It now remaineth that we giue a forme vnto these proofes or arguments, and shew how to frame an argument, so as it may be of force to proue.

An argument or reasoning is by the Philosophers called *a Syllogisme*; which

which is a Greeke word ſignifying the making vp of an account, or the collecting of a ſumme. For that which is the making vp of an account, or the totall ſumme of Additiō or Multiplication in Arithmetick, the ſame is the concluſion in a Syllogiſme, namely, that which reſulteth and followeth from the proofe.

Every Syllogiſme is compoſed of two Propoſitions or Enuntiations, and of a Concluſion.

Enuntiation is a ſpeech, wherein ſomething is affirmed or denied.

Every Enuntiation conſiſts of two words at the leaſt, which the Logicians call Termes: as, who would ſay, the two ends, or the two peeces. For example.

*The fire burneth.*
*God is good.*

Theſe Enuntiations are compounded of two parts, the one is called the Subject; the other, the Attribute. *Fire* is the Subject; and *burneth* is the Attribute; For burning is attributed to fire. *God* is the Subject; and this word *good* is the Attribute. This

This Verb, *It*, is not reckoned as a part of the Enuntiation, but is onely the linke and bond of these two parts.

Whersoever there is an affirmation or negation, there is an Enuntiation, though it seemeth to be but one word. As when we say in Latin, *Curro*, we vnderstand, *ego curro, I runne.* And in English, *It raineth*, is an vsuall and common word, which is as much as this Enuntiation, *the raine falleth.* So when we say, *It freezeth, It snoweth*, &c.

And when wee aske any body, *Sleepe you?* He that answereth *No*, maketh a kinde of secret Enuntiation; for it is as much as if he should say, *I sleepe not.*

When we argue, the Enuntiations must be full and perfect, so as there may be no need of any supplying.

All truth and falshood is expressed by the Indicatiue mood; and therefore every Enuntiation must be couched in the Indicatiue; because wee affirme or deny a thing onely by that mood.

mood. And therefore Imperatiues, Optatiues, and Subiunctiues enter not into an Enuntiation, nor doe any ſervice to the Art of Logick, whoſe end and ſcope is to ſearch out and diſcerne the truth. Now truth is onely expreſſed by the Indicatiue. The other moods are left to Rhetorick, and ſerue onely for ornament.

Sometimes one of theſe termes or parts of the Enuntiation is expreſſed by many words; as,

*All the lines drawne from the center to the circumference of the circle are equall.*

*God is free from all infirmitie.*

The Verb Subſtantiue is that which cauſeth the Subject to be diſcerned from the Attribute; for is is placed between both.

An Enuntiation and a Propoſition are the ſame thing; yet out of a Syllogiſme wee call it Enuntiation, but in a Syllogiſme wee call it Propoſition.

The

## The second Chapter.

### *Of the kinds of Enuntiation.*

ENuntiations are either Simple or Compounded.

The Simple Enuntiatiõ, which also is called Categoricall, when a thing is affirmed or denied simply & without condition, and without adding a *Whether*, or an *If*; as,

*Man is reasonable.*
*Heaven is round.*
*Water is colde.*
*God is no lyar.*

Of these Enuntiations some are Vniversall, and some particular.

Vniversall Enuntiations are such as haue these words, *All*, or *None*, joyned with them. As,

*All men are sinners.*
*No man is perfect.*

Particular Enuntiations are such as doe not affirme or denie generally of all, but onely of some in particular. As,

*Some*

*Some man is blacke.*

*Some Kings haue not beene wise.*

*Every horse is not white.*

Vnder particular Enuntiations, the Singulars are also comprehended: As,

*Peter is foolish.*

*This man is a Philosopher.*

Enuntiations which haue no note whereby they may be discerned to be vniversals or particulars, are called Indefinites, and in strict dealing must be taken for particulars. Notwithstanding, when the matter is Necessarie, they are of as much force as vniversals. As when I say, *Man is reasonable*, it is as much as if I should say, *All men are reasonable.*

But if the matter be contingent and and mutable: as,

*Man is white,*

they are but as particulars, and is no more then if I should say,

*Some man is white.*

Againe, Enuntiations are either Affirmatiue or Negatiue: Affirmatiue; as, *God is good.* Negatiue; as, *God is no lyar.*

Thus

Thus we ſee there are foure kinde of Enuntiations. For they are either Vniverſall Affirmatiues. As, *All men are white.* Or Vniverſall Negatiues, as, *No man is white.* Or Particular Affirmatiues, as *Some man is white.* Or Particular Negatiues, as, *Some man is not white.*

The vniverſalitie or particularitie of an Enuntiation is called the quantitie thereof. But to be Affirmatiue or Negatiue maketh the qualitie.

Simple Enuntiations are ſometimes modified by certaine circumferences of Neceſſitie, or Contingency, or Poſſibilitie, or Impoſſibilitie; as,

*It is neceſſary that man be reaſonable.*

*It falleth out that it thunders in Winter.*

*It is poſſible that it raineth or hath rained.*

*It is impoſſible that the Scale ſhould be mortall.*

An Enuntiation thus modified or qualified by ſuch circumſtances is Negatiue, when the negation is joyned to the modification or circumſtance.

ſtance. As when we ſay,

*It is not neceſſarie that Cæſar ouercome.*

But this Enuntiation,

*It is neceſſarie that Pompey ouercome not*, is affirmatiue.

Compounded Enuntiations are either Conditionall or Disjunctiue.

Conditionall Enuntiations are ſuch as neither affirme nor deny ſimply, but with an *If*; as,

*If it be day, the Sunne is vp.*
*If God will, the troubles ſhall ceaſe.*

Theſe Enuntiations are compounded of two parts; the former is called the Antecedent: and the latter the Conſequent. And both theſe may be affirmatiue; as,

*If it be day, the Sunne is vp.*

Sometimes the one is affirmatiue, and the other negatiue; as,

*If the Sunne be not vp, it is night.*
or, *If the Sunne be vp, it is not night.*

And ſometimes both negatiues; as,

*If it be not a liuing creature, it is no man.*

Disjoyned

Disjoyned or Disjunctiue Enuntiations are such as are compounded of opposed parts, whereof the one ouerthrowes the other; as, either,

*It is day, or night.*

*This man is aliue, or dead.*

These Enuntiations are not true, except both parts be immediately contraries or opposits. For if I should say,

*This cloake is blacke, or white,*

I might speake against the truth; for the cloake may be gray or tawnie, &c.

## The third Chapter.

### *Of the Opposition of Enuntiations.*

OF Enuntiations some are necessary, and some probable or contingent. According to this difference Enuntiations are more or lesse oppositone to another. Necessarie Enuntiations are either when the Genus is attributed to the Species; as, *Man is a liuing creature.* Or the difference;

as, *Man is reasonable.* Or the propertie; as, *All fire is hot.* The Contingents are when some accident is attributed to the Subject; as, *The horse is white. Man is a Physician.*

The Opposition of Enunciations is done three manner of wayes. Either as Contraries, or Subcontraries, or Contradictories. In all which Oppositions one of the two opposed Enunciations must ever be affirmative, and the other Negative, and the same termes must still be kept.

Contrary Enunciations are an universall affirmative, and an universall negative; as,

*All men are just.*
*No man is just.*

Which are both false, because the matter is Contingent. But if the matter be Necessary, then the one is true, and the other false; as,

*All men are living creatures.*
*No man is a living creature.*

Subcontrarie Enunciations are two particulars contained vnder two universals, whereof the one affirmeth, and

and the other denieth; as,

*Some man is iust,*
*Some man is not iust.*

In a necessary matter the one is true, and the other false. But in a contingent matter they may both be true.

Contradictory Enuntiations are an vniversall affirmatiue, and a particular negatiue. Or els an vniversall negatiue, and a particular affirmatiue; as,

*All men are white.*
*Some man is not white.*

Or els.

*No man is not white.*
*Some man is white.*

Of these two Enuntiations it is necessary that the one be true, and the other false, in what matter soever it be.

Contraries agree in quantitie, but are opposit in qualitie; as also Subcontraries: but Contradictories are both.

## *The Opposition of Enuntiations in matters Necessary.*

The one true and the other false, VNIV. AF. All men are living creatures. *Contraries.* VNIV. NEG. No man is a living creature.

*Subordinates.* *Contradictories* *Contradictories* *Subordinates.*

The one true and the other false, PART. AF. Some man is a living creature. *Subcontraries.* PART. NEG. Some man is no living creature.

## *The Opposition of Enuntiations in a matter Contingent.*

Both false. VNIV. AF. All men are white. *Contraries.* VNIV. NEG. No man is white.

*Subordinates.* *Contradictories* *Contradictories* *Subordinates.*

Both true. PART. AF. Some man is white. *Subcontraries.* PAR. NEG. Some man is not white.

Two

Two ſingular Enuntiations cannot be oppoſed one to another, but Contradictorily; as,

*Peter is white. Peter is not white.*

And therefore of neceſſitie the one muſt be true, and the other falſe.

## The fourth Chapter.

### *Of the Converſion of Enuntiations.*

TO Convert an Enuntiation, is to change it ſo as that the ſubject is turned into the attribute, and the attribute into the ſubject, keeping ſtill the truth. As, *No man is a horſe.* Then if you will convert this Enuntiation, you muſt ſay, *No horſe is a man.*

This Converſion is done either Simply, or by Accident.

The Simple Converſion is, when the Enuntiation is changed without altering the quantitie. Thus are vniverſall negatiues converted; as in the example before mentioned.

And ſo are particular affirmatiues,

As, *Some man is learned*, and, *Some learned is a man.*

But vniuerſall affirmatiues cannot be converted Simply. For in turning them ſo, their truth would be loſt. Thus it is true, that, *Every man is a liuing creature*: but it is not true, that, *Every liuing creature is a man.*

Therefore when wee goe about to convert ſuch Propoſitions, wee take away their vniuerſall quantitie, and in ſtead of ſaying *Every man is a liuing creature*, we turne it into a particular Enunciation, & ſay, *Some liuing creature is a man.* Except when the ſubject is the ſpecies, & the attribute the property or differēce. For in this caſe the propoſition may bee converted ſimply. For example, *All liuing creatures haue ſenſe*: and, *All, that hath ſenſe is a liuing creature. All bodies haue three dimenſions: All that hath three dimenſions is a bodie.*

Particular negatiues are not converted: for example, this Enunciation, *Some man is not a Philoſopher*, is true. But if you would turne it, it would

proue

proue false: *Some Philosopher is not a man.*

Vniuersall affirmatiues may be conuerted into vniuersall negatiues, composed of two negations. As,

*All men are liuing creatures.*

*Whatsoeuer is not a liuing creature is no man.*

A singular affirmatiue may be conuerted into a particular affirmatiue. As, *This horse is lame:*

*Some lame thing is a horse.*

# The fourth Booke.

## Of a Syllogisme, and the forme and kindes thereof.

### The first Chapter.

*What a Syllogisme is. Also, what a Conclusion is, and a Question, or Probleme, and the parts thereof.*

A Syllogisme is a reason or argument in the which from two Enuntiatiõs or propositions coupled together by certaine lawes, wee draw and deduce a necessary Conclusion. For example, if wee joyne these two Propositions together,

All

*All that liveth hath a ſoule,*
*All plants liue,*
This concluſion will follow,
Therefore *all plants haue a ſoule.*

As Propoſitions are called Enuntiations before they belong to a Syllogiſme; So the Concluſion before it be proued by a Syllogiſme, is not called a Concluſion, but a Queſtion or Probleme.

Now every queſtion or concluſion hath two parts, namely, the Subject, and the Attribute. As in the example aboue mentioned. *Plant* is the Subject, and, *to haue a ſoule*, is the Attribute. The Philoſophers call them the two Termes, whereof the ſubject is called the leſſer Terme, and the attribute the greater Terme: becauſe the attribute commonly is more generall then the ſubject. And that which in the Mathematicks is ſaid, *to containe*, in Logick is ſaid, *to be attributed*.

The

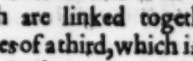
## The second Chapter.

### *How to make a Syllogiſme, and of the parts of it.*

A Syllogiſme is thus made. A queſtion or probleme is propounded: For example, let the queſtion be, *Whether Philip be a living creature, or no?* Now he that will proue by a Syllogiſme that *Philip* is a living creature, muſt diſmember the ſaid queſtion into two parts; the one whereof is the ſubject, namely, *Philip*; and the other the attribute, namely, *living creature*. Then hee muſt looke out ſome third thing, which may be joyned and fitted to each of theſe two parts. For example, the word *Man*, which he muſt firſt joyne with *living creature*, and ſay, *Every man is a living creature*; and then he muſt joyne it with *Philip*, and ſay, *Philip is a man*; thence will follow this Concluſion, Therefore *Philip is a living creature*.

This

This word *mes* is called the Meane or Link: because by the meanes thereof as by a Link, the two parts of the concluſion are coupled together. It is of this as of two Rings which are linked together by the meanes of a third, which is placed between both, as,




If the Ring A be joyned with the Ring B and the Ring B with the Ring C, it followeth that the Ring A is joyned with the Ring C.

This may alſo be illuſtrated by an example drawne from Numbers, reaſoning thus. Twelue containeth ſix, and ſix containeth three, therefore twelue containeth three. For we ſaid before, that that which is ſaid *to containe* in Mathematicks, the ſame is ſaid *to be attributed* in Logick.

Therefore every Syllogiſme is compounded of three parts or Termes, namely, the Subject of the concluſion, the Attribute of the concluſion, and

and the Meane or middle Terme, which knitteth these two parts of the conclusion together.

It is no hard matter so soone as a Syllogisme is propounded, presently to perceiue which is the Middle terme. For it is all that which is not in the conclusion.

The Meane or middle terme joyned with the attribute of the conclusion, maketh that proposition which is called the Major or Greater: because the attribute of the conclusion which is called the greater terme is there. The same Meane being joyned with the subject, maketh the other proposition, which is called the Minor or Lesser; so called because the subject of the conclusion which is called the lesser terme is there. This Minor proposition is also called the Assumption. Now for more ease in this point, we will call the first proposition simply *the proposition*, and the second *the assumption*.

The

## The third Chapter.

### *The naturall reason vpon which a Syllogisme is grounded.*

THis structure of a Syllogisme is grounded vpon two naturall Maximes, acknowledged to be true by those of the Meanest capacitie. Whereof the first is. *Whatsoever containeth any thing, containeth also that which is contained in that thing.*

Which Maxime conceived in Logicall termes, is thus to be expressed. *Whatsoever is generally attributed to any thing, must also be attributed to such things, as the said thing is attributed vnto.* As, seeing that *to be a living creature* is attributed to *all men*, it must also be attributed *to Philip*, because *Philip* is a man. This first Maxime is the foundatiō of all Syllogismes that conclude affirmatiuely.

The second Maxime is, *That which agreeth not to a thing and cannot be attributed vnto it, agreeth not likewise to those*

*those things which are contained under that said thing.* As, *to be Almighty* belongeth not to *any creature*; therefore it belongeth not *to Angels*, because they are creatures. This Maxime is the ground of all Negative Syllogisms, that is to say, such as conclude negatively.

## The fourth Chapter.

### *Of the Figures of a Syllogisme.*

BEcause the Meane is diversly joyned with the two termes of the conclusion: hence it comes to passe that according to the divers placing of the said Meane, sundry Figures and Formes of Syllogismes doe arise. Now these Figures are three.

The first figure is that wherein the *meane* is the subject in the proposition, and the attribute in the assumption. As, in the examples before named; and also in this,

*All* MEN *are sinners.*
*Paul is a* MAN.
Therefore *Paul is a sinner.*

The

The second figure is when the Meane is the attribute both in the proposition and in the assumption. As,

*All birds have* FEATHERS.
*No Batt hath* FEATHERS.
Therefore *no Batt is a bird.*

The third figure is when the Meane is the subject as well in the proposition, as in the assumption. As,

*The* SOVLE *is immortall.*
*The* SOVLE *is a creature.*
Therefore *some creature is immortall.*

## The fifth Chapter.

### *Generall Rules, common to all Figures.*

ALL Syllogismes that are faulty in any of the Rules following conclude nothing.

### The first Rule.

*A Syllogisme must have three Termes,* namely, the Subject, and Attribute of the conclusion, and the Meane; for where

where there be two Meanes the Syllogiſme is ſtarke naught. The reaſon drawne from nature is this: If two rings be linked with two other ſeverall rings, it followeth not that therefore theſe two former rings be linked together. And likewiſe if you would know whether two peeces of ground agree in quantitie, you muſt not take two ſundry meaſures; but onely one and the ſame. Now the two Termes are like vnto theſe two peeces of ground, and the Meane is like vnto the ſaid meaſure.

We vſe to ſay there be foure termes, not onely when wee finde in a Syllogiſme foure differing termes in words; but alſo when one and the ſame word is taken in a double ſenſe, and is equivocall; as,

KING *is but one ſyllable.*
*Alexander is a* KING.
Therefore *Alexander is but one ſyllable.*

King in the propoſition is taken for the word; in the aſſumption for the perſon. Likewiſe if I ſhould ſay,

*Every* NVMBER *is an Accident.*
*Ten men are a* NVMBER.
Therefore *ten men are an Accident.*
I should make foure termes, for in the propositiõ the word *Number* is taken for the number numbring, and in the Assumption for the number numbred. Thus,

*The* END *is good.*
*Death is the* END.
Therefore *death is good.*

In the proposition the word *End* is taken for the scope, & in the assumption for the extremitie of a thing.

## The second Rule.

*Out of two negatiue propositions nothing can be concluded.* As,

*No man is a beast.*
*No horse is a man.*

Hence nothing is concluded. This may be known by the second fundamentall reason or Maxime, set downe in the third Chapter. And the reason is manifest: For conclusions are then Negatiue, when the Meane agreeth with one of the termes of the conclusion,

sion, and not with the other: whence it is inferred, that the termes of the conclusion agree not together. And therfore the Meane must needs agree with one of the two termes; and this is expressed by affirmation.

Yet here is an exception, namely, when the proposition hath two negations equivalent to an affirmation. For example,

*Whatsoever is not a living creature is not a man.*

*A Statua is not a living creature.*

Therefore *a Statua is not a man.*

This Syllogisme is good, for the proposition having two negations, importeth as much as this affirmatiue: *Every man is a living creature.*

## The third Rule.

*If both the propositions be particulars, the Syllogisme is not good, and the forme of it is naught, and can conclude nothing.*

This is likewise evident by the two fundamentall Maximes set downe in the third chapter, where these words, *Whatsoever containeth any thing*, pre-

ſuppoſe an vniverſall propoſition.

Nevertheleſſe, from two ſingular propoſitions a particular concluſion may be well drawne in the third figure. As,

NERO *was a Minſtrell.*
NERO *was an Emperour.*
Therefore *ſome Emperour was a Minſtrell.*

Againe.

IVDAS *is damned.*
IVDAS *was an Apoſtle.*
Therefore *ſome Apoſtle is damned.*

Or in the ſecond figure.

*Therſites was* DEFORMED.
*This man is not* DEFORMED.
Therefore *this man is not Therſites.*

Whence it is eaſie to ſee, that ſingular propoſitions are of more force in reaſoning then particulars.

The fourth rule.

*The concluſion ever followeth the worſer and the weaker of the two propoſitions:* That is to ſay, if one of the propoſitions be Negatiue, the concluſion alſo muſt be negatiue, and if one of the

the propoſitions be particular, the concluſion alſo muſt be particular.

Whence it followeth, that if the propoſitiō be an vniverſall negatiue, and the aſſumption a particular affirmatiue, the concluſion muſt be a particular negatiue. For affirmation is better then negation, & an vniverſall propoſition is better then a particular, becauſe it teacheth more things. The reaſon of this Maxime is evident. For a thing of leſſe worth cannot bring forth a thing more excellent, then it ſelfe.

The fift Rule.

*There muſt not be more in the concluſion then there is in the propoſitions,* As,

*All that is ordained of God is good.*
*Marriage is ordained of God.*
Therefore *marriage is good for an old man*; or, *with an Infidell.*

The ſixt Rule.

*True propoſitions well coupled, cannot bring forth a falſe concluſion, but falſe propoſitions may by chance yeeld a true*

*conclusion.* Which is done, when wee intend to proue a truth by a false reason; and a true conclusiō by a Meane which agreeth with neither of the two termes, or onely with the one. As, who would proue *Philip to be a liuing creature*, because he is a horse. Or that *a diamond is a stone*, because it is a man. As,

*All men are stones.*
*All diamonds are men.*
Therefore *all diamods are stones.*

This conclusion is true, howsoeuer the two propositions be false.

## The sixth Chapter.

### *Speciall Rules for euery Figure, and first for the first.*

*IN the first figure the proposition must be vniuersall, and the assumption affirmatiue:* or els the Syllogisme is naught. For example,

*Some bodie is a liuing creature.*
*Euery stone is a bodie.*
Therefore *some stone is a liuing creature.*

This

This conclusion is false, and followeth not from the propositions: because the first proposition is particular. And if I argue thus,

*All men are living creatures,*
*No horse is a man.*
Therefore *no horse is a living creature.*

.This conclusion is false, and followeth not from the propositions; because the assumption is negatiue. This rule is grounded vpon the second Maxime set downe in the third Chapter which saith, that in Syllogismes concluding negatiuely, one of the propositions must be affirmatiue, Except when the negation doe make a part of the Meane. As if I say,

*All that is not right is crooked.*
*This line is not right.*
Therefore *this line is crooked.*

The evidence of this will appeare, if you frame the assumption thus,

*This line is a line which is not right.*

For then the assumption is turned into an affirmatiue.

The preeminences & prerogatiues

of the first figure are great aboue the two others. For the second figure cannot conclude affirmatiuely, and the third figure cannot conclude vniuersally, but in the first figure we may conclude all manner of wayes, and proue all manner of questions: whether vniuersall affirmatiues, or vniuersall negatiues, or particular affirmatiues, or particular negatiues.

Vniuersall affirmatiues. As we may proue that all couetous persons are theeues, because they withhold other mens goods.

Againe vniuersall negatiues. As we may proue that no couetous person is free, because he is a slaue to his money.

Wee may also proue in the first figure a particular affirmatiue conclusion. As we may proue that some fishes haue lungs, because they breath.

Lastly, we may proue in the first figure a question that is particular negatiue. As, that *Iudas* and *Saul* are not saued, because they were impenitent.

More-

Moreover, the excellencie of the first figure appeares in this, that the others are reduced vnto it. For by changing something in them, they are reduced to the first figure; as wee shall see hereafter.

## Rules for the second Figure.

In the second Figure the Meane is the attribute in both the propositions.

*The first proposition in this figure must be universall,* or els nothing can be concluded. As,

*Some living creatures haue two feet.*
*No horse hath two feet.*
Therefore *some horse is not a living creature.*

The conclusion is false, and followeth not; because the proposition is particular.

Againe, *in the second Figure one of the propositions must be negative, and consequently the conclusion.* For this reason were not good to say,

*All hennes haue two feet.*
*You haue two feet.*
Therefore *you are a henne.*

The

The naturall reason hereof is apparant. For it followeth not, that if one thing be attributed to two other things, that these two things should be the same thing. As, if to be *yellow* belongs both to *hony* and to *gall*, it followeth not therefore *that hony is gall*; but it followeth well in the negatiue. As,

*Hony is sweet.*
*Gall is not sweet.*
Therefore *gall is not hony.*

The naturall reason heereof is, because if one thing belongeth to one of the two termes of the question, and not to the other, it followeth that the two termes agree not together.

How to reduce the Syllogismes of this second figure to the first.

In this figure when the proposition is negatiue, it is easie to convert and reduce the Syllogisme vnto the first figure. For then we must onely convert the proposition simply. As.

*No terrestriall body moones vpward.*
*Smoake moones vpward.*
Therefore *smoake is no terrestriall body.*

You may convert this proposition, say-

saying thus,

*Nothing that mooues vpward is a terrestriall body.*

And so you shall haue it in the first figure.

But if the assumption be negatiue, you must put it in the place of the proposition, and then conuert simply the conclusion, as also the assumption, which is become the proposition. As in this Syllogisme,

*All men are liuing creatures.*

*No statua is a liuing creature.*

Therefore *no statua is a man.*

You must change the assumption, and say,

*No liuing creature is a statua.*

And set it in the place of the proposition, thus,

*No liuing creature is a statua.*

*All men are liuing creatures.*

Whence the conclusion followeth well,

Therefore *no man is a statua.*

Which is the same conclusion, but onely converted simply.

Rules

## Rules for the third Figure.

In the third figure the Meane is the subject in both propositions.

*The assumption must be affirmative, as in the first figure.*

*The conclusion is alwayes particular, and cannot be universall.*

The naturall reason hereof is, because if two things are attributed to the same thing, it followeth not that these two things agree alwaies together: but onely it followeth that they agree sometimes and in certaine subjects. As, if to be *bright* and *round* belongs to the Sunne, it followeth not that whatsoever is round must bee bright. So *to be reasonable* and *to have two feet* belongs to man; whence it followeth not, that whatsoever hath two feet must be reasonable: but onely that something which hath two feet is reasonable.

The Syllogismes of this figure are reduced to the first by converting the assumption. As,

*All horses neigh.*

*All horses have foure feet.*

There-

Therefore *something that hath foure feet weigheth.*

If you convert the aſſumption, ſaying,

*Something that hath foure feet is a horſe,*

This Syllogiſme will be in the firſt figure.

But if the propoſition be particular, as in this Syllogiſme,

*Some Apoſtle is damned.*
*All Apoſtles are ſent of God.*
Therefore *ſome one that is ſent of God is damned.*

Now to reduce this Syllogiſme to the firſt figure, you muſt convert the propoſition, and ſay,

*Some damned perſon is an Apoſtle.*

And then put it in the place of the aſſumption in this manner,

*All Apoſtles are ſent of God.*
*Some damned perſon is an Apoſtle.*
Therefore *ſome damned perſon is ſent of God.*

Which is the very ſame concluſion, but ſimply converted.

How to reduce the Syllogiſmes of the third figure to the firſt.

The

## The seventh Chapter.

*Certaine artificiall words which serue to shew how many wayes wee may argue in each figure, and how the second and third figure may be conuerted into the first.*

TO helpe the memory *Logicians* haue found out certaine artificiall words, which serue to shew how many waies a man may argue in each figure. The words are these;

1. BARBARA, CELARENT, DARII, FERIO.
2. CESARE, CAMESTRES, FESTINO, BAROCO.
3. DARAPTI, FELAPTON, DISAMIS, DATISI, BOCARDO, FERISON.

To vnderstand the vse of these words, you must note that every one of these words hath but three Syllables: the first wherof signifies the proposition, the

the second the assumption, and the third the conclusion.

Againe, note that in all these words there are but foure Vowels, namely these,

A. E. I. O.

A signifieth an vniversall affirmatiue proposition.

E signifieth an vniversall negatiue proposition.

I signifieth a particular affirmatiue proposition.

O signifieth a particular negatiue proposition.

The Syllogismes which are made in the first figure are noted by these words, Barbara, Celarent, Darij, Ferio. 1.

The word BARBARA, intimates, that whensoever the two propositions in the first figure shall be A, that is, vniversall affirmatiue, the conclusion shall likewise be A, that is, an vniversall affirmatiue.

So the word CELARENT signifieth that whensoever the proposition in the first figure shall be E, that is, an vniversall negatiue, and the assumpti-

ſumption A, that is, an vniverſall affirmatiue; the concluſion ſhall be E, that is, an vniverſall negatiue. So likewiſe of all the other words.

2. The Syllogiſmes of the ſecond figure are noted by theſe words, Ceſare, Cameſtres, Feſtino, Baroco,

The word FESTINO intimates, that whenſoever the propoſition in the ſecond figure ſhall be E, that is, an vniverſall negatiue, & the aſſumption I, that is, a particular affirmatiue, the concluſiō ſhall be O, that is, a particular negatiue. As,

FES—*No compounded thing is eternall.*

TI—*Some thing in man is eternall.*

NO—Therfore *ſomething in man is not compounded.*

Note that in theſe foure words, the laſt ſyllables are alwayes either E or O, to ſhew that the concluſion muſt alwayes be negatiue.

3. The Syllogiſmes of the third figure are noted by theſe words, Darapti, Felapton, Diſamis, Datiſi, Bocardo, Feriſon, and haue the ſame vſe. For

For example, the word FELAPTON signifieth that if the proposition in the third figure be E, that is, an vniuersall negatiue, and the assumption A, that is, an vniuersall affirmatiue, the conclusion must be O, that is, a particular negatiue. As,

FE—*No Batt hath feathers.*

LAP—*All Batts flie.*

TON—Therefore *something that flies hath no feathers.*

Note that in all these six words, the last syllables haue either I or O, to shew that the conclusion in the third figure must alwayes be particular.

The Consonants of these same words are not without their speciall vse. For they serue to know how the Syllogismes of the second and third figure may be reduced to the first. To this end serveth the first capitall letter. For Cesare and Camestres are reduced to Celarent: Darapti, Disamis, Datisi are reduced to Darij: Festino, Felapton, Ferison are reduced to Ferio.

Baroco and Bocardo cannot be reduced,

duced, becauſe one of the propoſitions is a particular negatiue, which cannot enter into the firſt figure.

S ſignifieth that the propoſition which is noted with an S, muſt be ſimply converted. As in Ceſare and Datiſi.

P ſignifieth that the propoſition muſt be converted by Accident, that is to ſay, that the vniuerſall affirmatiue muſt be converted into a particular affirmatiue. As in Darapti and Felapton.

M ſignifieth that the propoſitions muſt be tranſpoſed, and muſt change their place. As in Cameſtres and Diſamis, whereof we haue given examples.

## The eight Chapter.

### *Of an Enthymeme.*

AN Enthymeme is nothing elſe but a Syllogiſme, whereof one of the propoſitions is ſuppreſſed, either for brevities ſake, or for ſome deceipt.

ceipt. For brevitie, as

*God sinneth not.*

Therefore *God is no lyar.*

Or

*Nothing that corrupteth man can be the chiefe good.*

Therefore *Voluptuousnesse is not the chiefe good.*

For deceipt, as,

*This Common-wealth is the greatest.*

Therefore *it is the best.*

Or

*Whatsoever troubleth a Common-wealth must be banished.*

Therefore *the Gospell must be banished.*

In these imperfect Syllogismes, that proposition is suppressed which is most odious, and wherein the falsehood lieth, namely, *Every Common-wealth, that is, the greatest is the best.* As also this, *The Gospell troubleth a Common-wealth.*

Sometimes to make the speech more smooth and currant, we put the conclusion in the first place. As,

*The estate of Oligarchy is the worst of all.*

*Because it is most subiect to ciuill warre.*

Rhetoricians call Enthymemes proofes grounded vpon probable signes. As,

*Milo killed Clodius:*
*For he hated him before.*

Or

*This man is learned:*
*For he is pale and hath many books.*

These proofes are of no force, except they be in great number. For signes and conjectures which haue no force being alone, become forcible when there are many of them together.

## The ninth Chapter.

### *Of Induction, and of Example.*

INduction is a Syllogisme wherein diuers singulars or particulars are as a Meane to proue an vniuersall conclusion. As when I will proue that *all liuing creatures haue feeling*; because *birds, fishes, serpents, terrestri-*

*all*

*all beasts, and Amphibia haue feeling.*

Or thus, *the Stag, the Doe, the Hare, the Coney, the Mouse haue a great heart in proportion to their bodie: Now the fearfull creatures are the Stag, the Doe,* &c. Therefore *all fearfull creatures haue a great heart in proportion to their bodies.*

By this kinde of discourse all Sciences haue beene invented. For example, Physicians having by the tryall of many plants of Mercurie or of Parietarie obserued, that they are laxatiue, haue thence gathered a generall rule, that all plants of Mercurie or Parietarie are laxatiue. Thus haue men attained to the knowledge of the causes of Eclipses, of Apoplexies, and of Flouds greater then ordinarie about the Æquinoxes by sundry particular obseruations.

An Example is an imperfect Induction. For in stead of many particulars we vse but one. *Of Example.*

In naturall causes Examples are more forcible then in ciuill and voluntary actions: because naturall e-

vents are much more alike then ciuill and voluntary actions, which are subiect to many changes and chaunces. As if I should say, *Yesterday in the euening the skie being red, the day following proued faire*: this example hath some likelihood to proue, that seeing the skie is red this euening, to morrow it will proue a faire day. But if I say, *Philip digging his garden found a pot of gold*, it followeth not that *Alexander* digging shall haue the same hap.

Orators notwithstanding do much enlarge themselues vpon such examples. And by reason of the mischiefs which haue hapned to any one through drunkennesse, or lying, or anger, they vse to exhort others to shunne the same vices.

## The tenth Chapter.

### *Of the Enumeration of parts.*

THe Enumeration of parts is also a kinde of Syllogisme, serving to con-

conclude both affirmatiuely and negatiuely.

When we will conclude affirmatiuely, we make a rehearsall of all the parts: that so having remooved all the parts but one, that one which remaineth may be concluded or affirmed. As,

*What goods soever a man hath, he hath them either by inheritance, or by purchase, or by exchange, or by gift, or by labour, or by play, or because he hath found them, or stollen them. But the goods which you haue, you haue them neither by inheritance, nor by purchase, nor by exchange, nor by gift, nor by labour, nor by play, nor because you haue found them.* Therefore *you haue stole them.*

But when we will conclude negatiuely, we remoue all the parts. As, *All Frenchmen are either Normans, or Picards, or Champenois,* &c. *But the Lorrains are neither Normans, nor Picards, nor Champenois,* &c. Therefore *they are no Frenchmen.*

You must ever take heed that the Enumeration be not imperfect; as,

when we say that *all mankinde is either male or female:* Or that *every action is either good or bad.* For there are Hermaphrodites; and there be some actions that are indifferent. So if I should say that *every qualitie is either a naturall faculties, or a habit, or an actiue qualitie in the obiects of the senses, this enumeration would proue imperfect.* For besides these there are *formes and figures.*

## The eleventh Chapter.

### *Of a Dilemma.*

A Dilemma is a forked or horned argument, wherein we giue our aduersary his choise of two things, to shew him that whether of the two soeuer he chooseth, he is still ouercome in both. As, to proue that a man should neuer marry, wee may argue thus, *If thou marriest, thy wife will be either faire or deformed; If faire thou wilt proue iealous; If deformed thou wilt not like her.* Therefore *it is better not*

to

*to marry.* Or, *be not a lawyer, for if thou pleadeſt for iuſtice, thou ſhalt diſpleaſe God; If thou pleadeſt for iuſtice, thou ſhalt diſpleaſe men.* Our Saviour Chriſt made a Dilemma when he was buffeted, ſaying, *If I haue ill ſpoken ſhew wherein; but if well, why ſmiteſt thou me?* Thus a man may reaſon againſt one that hath dreamed that we muſt not beleeue dreames: Or that hath ſworne that he will forſweare himſelfe. *If thou forſweare thy ſelfe, thou art a periur'd perſon; If thou doeſt not forſweare thy ſelfe, yet art thou ſtill a periur'd perſon; becauſe thou haſt ſworne that thou wilt forſweare thy ſelfe.*

*Carneades* gaue twentie crownes to his Maſter *Diogenes* to teach him Logick. One day diſputing with his Maſter according to the rules that he had taught him, his Maſter told him that he diſputed not well; Wherevpon his Scholar made him this Dilemma. *I diſpute either well or ill: If I diſpute well, why blameſt thou me? If I diſpute ill, giue mee backe my twentie crownes?* Such was the diſputation betweene

*Pro-*

Gellius. l.5.c.10.

*Protagoras* and his Scholar *Evathlus*, which example is well knowne, and the recitall would be too too long, You may see it in *A. Gellius. lib. 5. cap. 10.*

## The twelfth Chapter.

### *Of a Sorites, or heaping Syllogisme.*

A Sorites is a kinde of argument which knitteth many propositions together, to shew that the subject of the first agreeth with the attribute of the last. As,

*Whatsoever acteth, mooveth.*
*Whatsoever mooveth, is mutable.*
*Whatsoever is mutable, is corruptible.*
*Whatsoever is corruptible, is not God.*
Therefore *it is inferred, if God acteth, he is not God.*

So many propositions, so many Syllogismes which haue *God* for the subiect of the conclusion.

The

## The thirteenth Chapter.

### *Of Conditionall or Hypotheticall Syllogiſmes.*

VVE haue ſaid that Enuntiations are either ſimple or compound; and that of compounded Enuntiations, ſome are Conditionall or Hypotheticall, and ſome Disjunctiue.

Hitherto we haue treated of Syllogiſmes conſiſting of ſimple propoſitions, now we are to ſpeake of Conditionall and Disjunctiue Syllogiſmes, whoſe propoſitions are conditionall or disjunctiue.

A Conditionall Syllogiſme is, whoſe propoſition hath an *If*. As,

*If there be a God, he muſt be ſerved.*
*But there is a God.*
Therefore *he muſt be ſerved.*

The propoſition hath two parts, the firſt whereof is called the Antecedent, *If there be a God*: the ſecond is called the Conſequent, *He muſt be ſerved.*

There

There are two Rules for these Syllogisms.

I. Maxime. The first is, that *if the Antecedent be granted, the Consequent is also granted.* As,

*If Paul be a man, he is a living creature.*

*But he is a man,*

Therefore *he is a living creature.*

But you cannot by over-throwing the Antecedent, overthrow the Consequent. As,

*If a flie be a bird, it is a living creature.*

*But a flie is no bird.*

Therefore *it is no living creature.*

II. Maxime The second Maxime is, that *if the consequent be overthrowne, the antecedent is overthrowne also.* As,

*If a statua be a man, it is a living creature.*

*But a statua is no living creature.*

Therefore *it is no man.*

If the antecedent be the species, and the consequent be the difference or propertie, then you may overthrow the antecedent to overthrow the conse-

sequent. As,

*If a statua be a horse, it neigheth,*
*But it is no horse.*
Therefore *it neigheth not.*

But such conclusions follow by chance, and not by the force of the Syllogisme.

In these Syllogismes the assumption is part of the proposition, which proposition maketh an entire Syllogisme. And it is probable that this word *Assumption* is borrowed from these Syllogismes, because that in them the second proposition is taken and assumed out of the first.

## The foureteenth Chapter.

### *Of Disiunctiue Syllogismes.*

DIsiunctiue Syllogismes are such, whose proposition is compounded of two disiunctiue parts or peeces, or which are separated by this particle OR. As, *It is day or night. This number is even or odd.* As thus,

*This*

*This man is dead or aliue.*
*But he is dead.*
Therefore *he is not aliue.*
Or els thus,
*But he is aliue.*
Therefore *he is not dead.*
Or thus,
*But he is not aliue.*
Therefore *he is dead.*

For those propositiõs are compounded of such parts, the one whereof cannot be granted, without ouerthrowing the other; Nor can you ouerthrow the one without establishing or graunting the other. And for this cause, these two parts must be immediately opposit, so as there may be no third. For example, this argument is not good.

*There is peace or warre.*
*But there is no warre.*
Therefore *there is peace.*

For there may be a truce.

In these Syllogismes to the end that the truth may be euident and without exception, the two parts of the proposition must not be contradicto-

rie,

rie, but must be either contraries, or privatiues, or relatiues. For example, if I argue thus,

*This line is straight, or crooked.*
*But it is straight.*
Therefore *it is not crooked.*

This argument is cleere and certaine.

But if I argue thus,

*Philip is wise or vnwise.*
*But he is vnwise.*

From thence wee can draw no conclusion that may haue any likelihood of reason.

The

# ¶ The fift Booke.

## OF THE MASTER-PEECE OF LOGICK *called* DEMONSRATION.

### The first Chapter.

*What Science is.*

THis word *Science* is somtimes taken for the whole bodie of one kind of learning. Thus Ethicks, Physicks, Metaphysicks, civill Law, are called Sciences. Sometimes the word *Science* signifieth onely the knowledge of a

conclusion prooved by Demonstration. And this is it whereof we purpose to treat of in this place; which is thus defined.

Science is a certaine knowledge of a thing certaine, whose proofe is drawne from the cause.

To haue the Science of a thing, two certainties are required. The one is, that the thing be certaine of it selfe and vnchangeable. The second is, that the perswasion which wee haue of it be firme and cleare. If either of these two certainties be wanting it is no Science, but opinion. For a man may haue a doubtfull opinion of a thing certaine. As he that doubteth whether there be a God.

And on the contrary, a man may haue a firme and stedfast perswasion of that which is vncertaine and false. As those that suffer death for the defence of a false Religion.

And therefore it is not amisse to know the difference between *Science*, *Faith*, and *Opinion*. Science is a certaine knowledge of a certaine thing

by the next cause. Opinion is a doubtfull or false knowledge. Faith is a firme perswasion grounded vpon the Testimonie of some other.

If a man know certainly a thing because he seeth it, or toucheth it, that is neither called Science, nor Faith, nor opinion; but *sense*, which knoweth onely things singular: but Science is of things vniversall.

## The second Chapter.

### *What a Demonstration or Demonstratiue Syllogisme is.*

A Demonstratiue Syllogisme is that which giveth or bringeth certaine knowledge of the conclusion. If we will define it more exactly, we must define it thus: A demonstratiue Syllogisme is that which prooveth that the attribute of the conclusion is truely attributed vnto the subject, by a Meane that must be the next efficient or finall cause of the attribute of the said conclusion.

These two sorts of causes were called *externall*, in the Chapter of Causes aboue mentioned: because they are no parts of the effect, nor of the thing compounded, though sometimes the efficient cause be in the very same subject. As, the soule of man is the cause of the sense in man: and the thicknesse of gold is the cause of the weight of it. In these examples the efficient cause and the effect are in the same subject.

## The third Chapter.

### *What questions are demonstrable.*

SVch questions wherein the attribute is a substance, cannot bee prooved by demonstration: because substances haue no certaine efficient cause proper vnto them. For the will of God is an vniuersall cause common to all things, and by consequent it can be no Meane in a demonstratiue Syllogisme.

Againe,

Againe, such questions or conclusions wherein the attribute is a mutable or casuall accident, cannot be proved by demonstration: because these accidents haue no certaine and assured cause. As, *Philip is rich. Bucephalus halteth.*

But those questions are demonstrable, whose attribute is a proper and immutable accident, whereof the next efficient or finall cause may be given. For example, these questions may be prooved by demonstration.

*A transparent bodie is without colour.*

*Eunuches are never bald.*

*Fixt Starres doe twinckle.*

*The Moone suffers obscuritie.*

*Of all estates Oligarchie is the most subiect to civill warre.*

*Lines paralell never meet.*

*All bodies compounded of Elements are corruptible.*

*Vnder the scorching Zone it is very hot.*

For the next efficient or finall cause

of the attribute of these questiõs may be given.

## The fourth Chapter,

### *What the propositions of a demonstratiue Syllogisme ought to be.*

THe Demonstration must consist of necessary propositions; among which those are the most necessarie, which are called Immediate.

There be two sorts of immediate propositions, that is to say, such as are without any middle. For some are immediate in regard of the subject, and others are immediate in regard of the cause.

Immediate propositions in regard of the subject are when the attribute agreeth next of all and immediately to the subject, so as a neerer subject cannot be given. In such propositions the attribute agreeth with the subject, because it is such a subject. For example, if I say that *a horse hath*

*sense,*

*sense*, this attribute agrees not next and immediately to a horse; for there is a neerer subject, namely, an Animal, vnto the which sense belongeth. But if I say that *a horse neigheth*, this agreeth next and immediately to a horse, as he is a horse, and not by reason of any other neerer subject.

Immediate propositions in regard of the cause are, when an attribute is so neerely joyned to the subject, as that the cause or reason cannot bee yeelded why it should be so. For example, here is a Demonstration:

*Whatsoever hath a sensitive soule hath touching.*

*Every animal hath a sensitive soule.*

Therefore *every animal hath touching.*

In this Syllogisme the conclusion is immediate in regard of the subject, but not in regard of the cause. For in this Syllogisme the Meane is the cause of the conclusion. But the two propositions are immediate, both in regard of the cause, as also of the sub-

ject; for nothing can be alledged as a cause of their truths.

Sometimes the efficient and finall causes are linked together with a long chaine. As,

*Vnder the Æquator the aire is very hot, because it is very subtill; The aire is very subtill, because the Sunne doth rarefie it very much; The Sunne rarefies the aire, because the beames fall in right angles; The beames fall in right angles, because the Sunne is there in the Zenith.*

Thus it is in the finall cause.

*The Lungs draw in the aire to refresh the heat of the heart: The heat of the heart is refreshed to keepe the Temperature: The Temperature is kept to preserue life.*

So many causes, so many demonstrations. But the last where also the chiefest and last cause stands for the Meane, is the noblest of all: because it can no further be demonstrated; and the two propositions are immediate every manner of way.

The

## The fifth Chapter.

### *A ſpeciall note to know a perfect Demonſtration.*

OF all the markes of a perfect Demonſtration, this is the moſt evident, when it may be converted or reduced to a definition. For we haue ſaid heretofore that the definition of a proper accident is compounded of three parts; namely, of the Genus of that which is defined, and of the proper ſubject, and of the cauſe thereof. As the definition of Death is, the deſtruction of the life of the creature by the extinguiſhing of vitall heat. Out of this definition a demonſtration may be framed, making the Subject of this accident to be the ſubject of the concluſion, the Genus to be the attribute, and the cauſe the Meane. As thus, L.2.c.8.

*Whenſoever the vitall heat is extinguiſhed, life is deſtroyed.*

But

*But in a living creature the vitall heat is extinguished.*

Therefore *in a living creature life is destroyed.*

The same may be said of these definitions following. *Sleepe is the heavinesse of a living creature, by the cessation of the common sense. Thunder is a noyse in the clouds, by the breaking out of the fire.*

## The sixth Chapter.

### *Of an Imperfect Demonstration.*

WEE haue shewed that a perfect demonstration is that, which proueth by the next efficient or finall cause of the attribute; that the attribute of the conclusion agrees with the subject.

If any of these perfections be wanting, the demonstration is the weaker, and lesse perfect.

If the Meane be not the next cause of the attribute, but onely a remote cause, then is the demonstration weaker,

ker, and more imperfect. And such demonstrations for the most part conclude negatiuely. For example.

*Where there is no opposition of contrary qualities, there is no death.*

*But in the heauens there is no opposition of contrary qualities.*

Therefore *in heauen there is no death.*

Or

*He that is of a cold temperature will never be bald.*

*But Eunuches are of a cold temperature.*

Therefore *Eunuches will never be bald.*

In these demonstrations the propositions are not immediate: For the Meane is not the next cause of the attribute. To haue no contrary qualities is not the next cause of not dying, but a remote cause: for the next cause of not dying in mans body is the continual preservation of the humors in an equall temperature; and the cause hereof is to haue no contrarietie

rietie or combate betweene the elementarie qualities in the bodie.

Thus the cause why Eunuches become not bald is, because the radicall humor of the haires is not spent; and the remote cause is, because they haue but little heat.

In these demonstrations the propositions are not immediate, for the Meane is not the next cause of the attribute.

And though the propositions be immediate, yet if the Meane be not the cause, but the effect of the attribute, then it shall be a lesse perfect demonstration; proving not the effect by the cause, but the cause by the effect. This kinde of demonstration shewes not why the conclusion is, but onely that it is. As,

*All that loue God are beloued of God.*
*But all that haue faith in Christ, loue God.*
Therefore *all that haue faith in Christ are beloued of God.*

The Meane is *to loue God*, which is not the cause, but the effect of the loue

loue which God beareth vnto vs; which *loue* is the attribute of the conclusion in this demonstration, wherein the cause is proved by the effect: whereas in a perfect demonstration we proue effects by their causes. Therefore this imperfect demonstration proveth onely that the thing is, but sheweth not why it is. The effect may very well be the cause of knowing, but not of being. As the smoake which we see come out of a chimney may be a cause to make vs know that there is fire in the house: but it is not the cause of the fire, but onely the effect. And the vnequall beating of the pulse is not the cause of the Ague, but it is a cause which makes vs know that such a one hath an Ague.

(∴)

The

# ¶ The sixt Booke.

# OF SOPHISMES OR FALLACIES.

## The first Chapter.

### *Of Fallacies in words.*

ALL *Fallacies* or *Sophismes* committed in disputing are either in the Words, or in the Matter.

Fallacies in words are of six kindes. 1. Æquivocation. 2. Amphibologie. 3. Deceipt by Composition. 4. Deceipt by Division. 5. Deceipt in the Accens or Pronuntiation. 6. And deceipt in the Figure of the word.

1. *Of*

### 1. *Of Æquivocation.*

Decipt by Æquivocation is, when the Meane is a doubtfull word, taken in the propoſition one way, and in the aſſumption another way. As,

*That which hath neither beginning nor ending, God created not.*

*The roundneſſe of the Heavens hath neither beginning nor ending.*

Therfore *the roundneſſe of the Heavens God created not.*

In the propoſition beginning and ending is taken for continuance of time: but in the aſſumption it is taken for the beginning and ending of a figure. Or thus,

*He that ſaith that thou liveſt, ſaith true.*

*He that ſaith that thou art a gooſe, ſaith that thou liveſt.*

Therefore *he that ſaith that thou art a gooſe, ſaith true.*

In the propoſition it is meant of an expreſſe ſaying; but in the aſſumption of a ſaying by conſequence.

Thus a man of great capacitie may be

be taken for a learned man, and sometimes for one whose stomacke is able to containe much wine.

The same fallacie may be commited also when a word is otherwise taken in the propositions, then in the conclusion.

### 2. *Of Amphibologie.*

Amphibologie is an ambiguous construction, making the sense doubtfull. As,

*Faith alone justifieth.*

It cannot be knowne whether the meaning be, that faith being alone justifieth; or els that faith justifieth onely. In the first sense it is false; for faith alone without good works is no true faith, and by consequent justifieth not. But in the second sense it is true that faith onely justifieth, because it onely hath the propertie to justifie. So it is true in one sense, that the eye alone seeth, but it is false in another sense that the eye seeth alone. For an eye that is out of the head seeth not.

3. *The fallacie in Compoſition.*

The fallacie in Compoſition is, when things are taken as conjoyned, which cannot be true, but in a divided ſenſe. As in this propoſition:

*A man that is ſet may runne.*

Which is true if it be meant at divers times; but if it be meant at the ſame time it is falſe and impoſſible. For a man that is ſet cannot runne whileſt he is ſitting. So, *that men are male and female*, is true of divers perſons; but falſe if it be meant of the ſame perſons.

4. *Of the fallacie by Diviſion.*

This fallacie of Diviſion is contrary to the former. For this ſeparateth things which cannot be true, except they be joyned together. Thus, though it be true that two and three make five, yet it followeth not, that two or three are five. If a man ſhould ſay, *This wall is white*, therefore *this wall is*; this conſequence were good, becauſe to be white is an accident which could not be, if the ſubject were

were not. But if one should say, *Philip is dead*, therefore *Philip is*, the consequence were not good: because that to be dead is not an accident, but a privation, which presupposeth that the subject, namely, *Philip*, was, but now is no more. Whosoever therefore argueth thus, divideth that which cannot be true except it be joyned. This division may happen sometimes in one word onely. As, *Ingeniosus*, being taken for one word is a commendation, but divided into two, as, *Ingenio suo*, it is a reproach.

### 5. *Of the fallacie in the Accent or Pronuntiation.*

The fallacie in the Accent is, when a false thing is affirmed under colour of pronouncing it as another thing that is true. For example,

*Where no ach it, there needs no salve.*
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Againe, if a man should say, *I am hot; are you as hot?* Or, *I am cold; are you*

*as cold?* A man cannot distinguish in fast speaking of it, whether he saith *a sot*, in stead of *as hot*; Or, *a scould* in stead of *as cold*. But being written a man shall easily perceiue this fallacie.

This fallacie is also cõmitted when that which is spoken positiuely, is taken as if it were spoken by Interrogation. As if a man commanding say to another, *Rest you*, and he taking it Interrogatiuely should answer; *No*.

### 6. *Of the fallacie in the Figure of the word.*

The fallacie in the figure of the word is, when from the Gender or Number of the word, or because the Verbe is Actiue or Passiue, a man will inferre that the nature of the thing is such. For example, if a man should argue, that Prudence, Temperance, or Iustice are onely proper and peculiar vnto women, because they are of the feminine gender, which no way followeth. So likewise, because to heare and to see be not Passiues, it follow-

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eth not, that therfore hearing and seeing are no Passiues. And although I say, that I haue receiued letters from my brother, it followeth not, that I haue receiued more then one, though the word be Plurall.

## The second Chapter.

### *Of Fallacies in the Matter.*

THere are seaven fallacies in the Matter; that is to say, when the deceipt lyeth not in the words, but in the ignorance or disguising of the thing. These fallacies are, 1. The fallacie by Accident. 2. The fallacie which taketh a thing as spoken simply or absolutely, which is true onely in some respect. 3. The Supposing of that which is in question. 4. The fallacie of Inconsequence. 5. The fallacie whereby a thing is taken for a cause which is not a cause. 6. The fallacie which mingleth divers questions as if they were but one. 7. The Ignorance of that which contradicteth the question.

## The third Chapter.

### *The fallacie by Accident.*

THe fallacie by Accident is, when from an assumption which is true onely by accident a conclusion is drawne which is absolute, simple, and without restraint. As in this argument:

*That which stirres vp troubles in a Common-wealth is pernicious.*

*The Gospell stirres vp troubles in a Common-wealth.*

Therefore *the Gospell is pernicious.*

Thus the Sunne darkeneth the eye-sight: and the law of God hardeneth the sinner. Whence if a man would inferre, that the Sunne were the cause of darkenesse, or, that the Law were the cause of sinne, he should fall into the fallacie of the Accident. For the Gospell of it owne nature stirreth vp no troubles, seing it preacheth peace: but men take occasion thereby to rise vp against it. Neither doth the Sunne

blind

blind the eyes by nature, but by accident, when it meeteth with a weake eye-sight.

## The fourth Chapter.

### *The fallacie which taketh a thing as simply true, which is not so, but onely in some respect.*

THis fallacie is committed, when one of the propositions being true onely in part, or in some respect, wee labour to draw from thence a conclusion to make it true at all times, in all respects, and in every part. As,

*Every good thing is to be desired.*
*Wealth is a good thing,*
Therefore *wealth is to be desired.*

The assumption is true in some respect onely, and to some men. For riches are not good, but to good men, and to such as can vse them well. And so in this Syllogisme:

*He that is borne of a woman had a beginning.*
*Our Saviour Christ was borne of a woman.*

Therefore *our Saviour Christ had a beginning.*

## The fift Chapter.

### *Of the Supposing of that which is in Question.*

VVE suppose that which is in question, when wee make a Syllogisme, wherein one of the propositions is the same thing which is in question, though it be couched in other termes. As if I would proue that the world was not *created*, because God *made* it not. Or, if I would proue that men are *iust*, because they are *without sinne*; that were to proue a thing by it selfe.

## The sixt Chapter.

### *Of the fallacie of Inconsequence.*

THe fallacie of Inconsequence is, when we breake the rules which are set downe in the Chapter of the conversion of Enunciations, and in the

the Chapter of Hypotheticall Syllogiſmes. For example, wee ſaid in the fourth Chapter of the third Booke, that an vniverſall affirmatiue enuntiation cannot be converted into any other propoſition, but into a particular affirmatiue, or into an vniverſall, having two negatiues. As, *All men are living creatures*, is thus converted; *Some living creature is a man*: Or into this, *Whatſoever is not a living creature is not man.*

Againe, we ſaid that in Hypotheticall Syllogiſmes we may proceede from the eſtabliſhing of the Antecedent, to the eſtabliſhing of the Conſequent: And that we may proceede from the over-throwing of the Conſequent to the over-throwing of the Antecedent.

Now if any would diſpute contrary to theſe Rules, ſaying, *All men are living creatures*; therefore *all living creatures are men.* Or, *All men are living creatures*; therefore *all that is not man is not a living creature*, he ſhould fall into the fallacie of a bad Conſequence.

The

The ſame fallacie is committed if you argue thus,

*If Bucephalus be a man, he is a living creature.*

*But he is a living creature.*

Therefore *he is a man.*

Or thus,

*If Bucephalus be a man, he is a living creature.*

*But he is not a man.*

Therfore *he is not a living creature.*

For ſuch arguments are againſt the rules of Hypotheticall Syllogiſmes, ſet downe in the thirteenth Chapter of the fourth Booke.

## The ſeaventh Chapter.

### *The fallacie whereby a thing is taken for a cauſe, which is none.*

THe fift fallacie is, when you alledge a Meane which ſeemeth to be the cauſe of the concluſion; but indeed is not. Such was the anſwer of a certaine Pyrate to *Alexander* the great: who having asked of him what had made him a Pyrate; he anſwered, that

that he was a Pyrate, becauſe he had but one Fregat or ſmall Barke; but if he had two hundred Gallies, as *Alexander* had, that then hee ſhould be a King. Such alſo are theſe proofes. The Church of *Greece* is the *beſt*, becauſe it is the *greateſt*. Or, This man is *learned*, becauſe he hath *many books*. Or, that *Charles* hath *a grey-beard*, becauſe *he was not hanged ten yeares agoe*. Here the ordinary fault is, when the occaſion is taken for a cauſe. For cauſes doe act, but occaſions act not; but are onely the ſubject and matter of acting. Thus truth breeds hatred, not of it owne nature, but by occaſion. So the Law of God hardeneth the hearts of wicked men that oppoſe themſelues againſt it. It is not the cauſe of the hardneſſe, but onely the occaſion.

## The eight Chapter.

*Of the fallacie which mingleth many Interrogations, as if they were but one.*

SOmetimes many Interrogations are cunningly entermingled, that an

an vntruth may be crowded in amongst many truths. As, *Cyrus, Alexander, Cæsar were they not valiant Kings?* Or, *these qualities, to be hey, olde, tall, one-eyde, are they not in this horse?*

Some will be ready to grant all this, not marking that *Cæsar* was never King; and that to be one-eyde is a privation, and not a qualitie; and that to be olde is not a qualitie, but a quantitie or length of time past. Therefore such Interrogations must be answered by distinction.

## The ninth Chapter.

### *Of the fallacie which is committed by the Ignorance of that which contradicteth the Question.*

THe fallacie through the Ignorance of that which contradicteth, is, when he that argueth against me brings a conclusion which he alledgeth as contrary or contradictorie to my position, which notwithstanding is nothing prejudiciall vnto it, and

and may be granted. For example, if I say that *God is no lyar*; a Sophister will goe about to conclude, that God saith not all the truth: which notwithstanding agrees very well with that which I affirme; neither doth it from thence follow that God is a lyar.

To the end therefore that these be not taken for contradictorie or contrarie Enuntiations, which indeed are not: we must vnderstand that if we will make two Enuntiations to be cõtradictorie, the termes must be vnderstood in the same sense in both, and without equivocation. Therfore these two Enuntiations, *Every Cocke is living*, and, *Every Cocke is not living*, are not contradictorie: if the one be meant of a living creature, and the other taken for the cocke of a Gunne. 1.

Againe, the attribute must agree with the subject in the same part, & according to the same time. Therefore these two Enuntiations, *Man is mortall*; and, *Man is immortall*, are not contradictorie: if the one be vnderstood of the body; and the other of 2.

the

the soule of man. And, *The Grecians were valiant*, contradicteth not this, *The Grecians were not valiant*, for both are true, if you consider them at severall times.

3. Againe, the attribute of the Enuntiation must not be vnderstood in diuers respects. For *Cicero is of great stature*; and, *Cicero is not of great stature*, may both be true, if *Cicero* be compared to diuers persons: little in comparison of a giant, and great in comparison of a dwarfe.

## The tenth Chapter.

### *Of the faults in Syllogismes.*

GEnerally all Syllogismes may be faultie, either in the forme, or in the matter. They are faultie in the Forme; when the rules of the figures are not obserued, committing a fault, either in the quantitie, or qualitie, or the propositions, or in the placing of the Meane, or if there be more then three termes.

The Syllogisme is faultie in the Matter,

Matter, when
or both, are fals
or in part. This fa
sometimes through
without cunning,
fraudulent and wi
as are the fallacies a
If a Syllogisme be f orme,
it must be brought rue forme.
If it be faultie in the matter, that proposition which is false must be denied. And if it be doubtfull or true in part onely, it must be distinguished.

But if the fault be neither in the forme, nor in the matter, but onely in the fallacie of the ignorance of that which contradicteth the question, by the which the adversary maintaineth a thing which doth not prejudice the question; in such a case wee must grant all that the adversary saith, and shew him, that in thinking to contradict vs, he doth it not.

The end and scope of these fallacies, is not to teach vs how to deceiue, but how to avoide deceipt.

*FINIS.*

XUM

Bartholmew Seame

)( 1

XUM

I haue read over this Booke, and I doe approue that it ſhould be Printed,

PETER DV MOVLIN.

# THE ELEMENTS OF LOGICK

By

PETER DV MOVLIN.

Translated out of the *French* Copie by NATHANAEL DE-LAVVNE, Bachelour of Arts in *Cambridge*.

With the Authors approbation.

*LONDON*,
Printed by *I. D.* for *Nicholas Bourne*, at the *Royall Exchange*. 1624.

XUM

ject; for nothing can be alledged as a cause of their truths.

Sometimes the efficient and finall causes are linked together with a long chaine. As,

*Vnder the Æquator the aire is very hot, because it is very subtill; The aire is very subtill, because the Sunne doth rarefie it very much; The Sunne rarefies the aire, because the beames fall in right angles; The beames fall in right angles, because the Sunne is there in the Zenith.*

Thus it is in the finall cause.

*The Lungs draw in the aire to refresh the heat of the heart: The heat of the heart is refreshed to keepe the Temperature: The Temperature is kept to preserue life.*

So many causes, so many demonstrations. But the last where also the chiefest and last cause stands for the Meane, is the noblest of all: because it can no further be demonstrated: and the two propositions are immediate every manner of way.

The

## The fifth Chapter.

### *A speciall note to know a perfect Demonstration.*

OF all the markes of a perfect Demonstration, this is the most evident, when it may be converted or reduced to a definition. For we haue said heretofore that the definition of a proper accident is compounded of three parts; namely, of the Genus of that which is defined, and of the proper subject, and of the cause thereof. As the definition of Death is, the destruction of the life of the creature by the extinguishing of vitall heat. Out of this definition a demonstration may be framed, making the Subject of this accident to be the subject of the conclusion, the Genus to be the attribute, and the cause the Meane. As thus, *L.2. c.8.*

*Whensoever the vitall heat is extinguished, life is destroyed.*

But

*But in a living creature the vitall heat is extinguished.*

Therefore *in a living creature life is destroyed.*

The same may be said of these definitions following. *Sleepe is the heavinesse of a living creature, by the cessation of the common sense. Thunder is a noyse in the clouds, by the breaking out of the fire.*

## The sixth Chapter.

### *Of an Imperfect Demonstration.*

WEE haue shewed that a perfect demonstration is that, which proueth by the next efficient or finall cause of the attribute; that the attribute of the conclusion agrees with the subiect.

If any of these perfections be wanting, the demonstration is the weaker, and lesse perfect.

If the Meane be not the next cause of the attribute, but onely a remote cause, then is the demonstration weaker,

ker, and more imperfect. And such demonstrations for the most part conclude negatiuely. For example.

*Where there is no opposition of contrary qualities, there is no death.*

*But in the heauens there is no opposition of contrary qualities.*

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Or

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And though the propositions be immediate, yet if the Meane be not the cause, but the effect of the attribute, then it shall be a lesse perfect demonstration; proving not the effect by the cause, but the cause by the effect. This kinde of demonstration shewes not why the conclusion is, but onely that it is. As,

*All that loue God are beloued of God.*
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The Meane is *to loue God*, which is not the cause, but the effect of the

loue which God beareth vnto vs; which *loue* is the attribute of the conclusion in this demonstration, wherein the cause is proved by the effect: whereas in a perfect demonstration we proue effects by their causes. Therefore this imperfect demonstration proveth onely that the thing is, but sheweth not why it is. The effect may very well be the cause of knowing, but not of being. As the smoake which we see come out of a chimney may be a cause to make vs know that there is fire in the house: but it is not the cause of the fire, but onely the effect. And the vnequall beating of the pulse is not the cause of the Ague, but it is a cause which makes vs know that such a one hath an Ague.

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### 2. Of Æquivocation.

Decipt by Æquivocation is, when the Meane is a doubtfull word, taken in the proposition one way, and in the assumption another way. As,

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In the proposition beginning and ending is taken for continuance of time: but in the assumption it is taken for the beginning and ending of a figure. Or thus,

*He that saith that thou liuest, saith true.*

*He that saith that thou art a goose, saith that thou liuest.*

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*The Gospell stirres vp troubles in a Common-wealth.*

Therefore *the Gospell is pernicious.*

Thus the Sunne darkeneth the eye-sight: and the law of God hardeneth the sinner. Whence if a man would inferre, that the Sunne were the cause of darkenesse, or, that the Law were the cause of sinne, he should fall into the fallacie of the Accident. For the Gospell of it owne nature stirreth vp no troubles, seing it preacheth peace; but men take occasion thereby to rise vp against it. Neither doth the Sunne

blind

blind the eyes by nature, but by accident, when it meeteth with a weake eye-sight.

## The fourth Chapter.

### *The fallacie which taketh a thing as simply true, which is not so, but onely in some respect.*

THis fallacie is committed, when one of the propositions being true onely in part, or in some respect, wee labour to draw from thence a conclusion to make it true at all times, in all respects, and in every part. As,

*Every good thing is to be desired.*
*Wealth is a good thing.*
Therefore *wealth is to be desired.*

The assumption is true in some respect onely, and to some men. For riches are not good, but to good men, and to such as can vse them well. And so in this Syllogisme:

*He that is borne of a woman had a beginning.*
*Our Saviour Christ was borne of a woman.*

Therefore *our Saviour Christ had a beginning.*

## The fift Chapter.

### *Of the Suppoſing of that which is in Queſtion.*

VVE ſuppoſe that which is in queſtion, when wee make a Syllogiſme, wherein one of the propoſitions is the ſame thing which is in queſtion, though it be couched in other termes. As if I would proue that the world was not *created*, becauſe God *made* it not. Or, if I would proue that men are *iuſt*, becauſe they are *without ſinne*; that were to proue a thing by it ſelfe.

## The ſixt Chapter.

### *Of the fallacie of Inconſequence.*

THe fallacie of Inconſequence is, when we breake the rules which are ſet downe in the Chapter of the converſion of Enuntiations, and in the

the Chapter of Hypotheticall Syllogiſmes. For example, wee ſaid in the fourth Chapter of the third Booke, that an vniverſall affirmatiue enuntiation cannot be converted into any other propoſition, but into a particular affirmatiue, or into an vniverſall, having two negatiues. As, *All men are living creatures*, is thus converted; *Some living creature is a man*: Or into this, *Whatſoever is not a living creature is not man.*

Againe, we ſaid that in Hypotheticall Syllogiſmes we may proceede from the eſtabliſhing of the Antecedent, to the eſtabliſhing of the Conſequent: And that we may proceede from the over-throwing of the Conſequent to the over-throwing of the Antecedent.

Now if any would diſpute contrary to theſe Rules, ſaying, *All men are living creatures*; therefore *all living creatures are men.* Or, *All men are living creatures*; therefore *all that is not man is not a living creature*, he ſhould fall into the fallacie of a bad Conſequence.

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The same fallacie is committed if you argue thus,

*If Bucephalus be a man, he is a living creature.*

*But he is a living creature.*

Therefore *he is a man.*

Or thus,

*If Bucephalus be a man, he is a living creature.*

*But he is not a man.*

Therfore *he is not a living creature.*

For such arguments are against the rules of Hypotheticall Syllogismes, set downe in the thirteenth Chapter of the fourth Booke.

## The seaventh Chapter.

### *The fallacie whereby a thing is taken for a cause, which is none.*

THe fift fallacie is, when you alledge a Meane which seemeth to be the cause of the conclusion, but indeed is not. Such was the answer of a certaine Pyrate to *Alexander* the great: who having asked of him what had made him a Pyrate; he answered, that

that he was a Pyrate, because he had but one Fregat or small Barke; but if he had two hundred Gallies, as *Alexander* had, that then hee should be a King. Such also are these proofes. The Church of *Greece* is the *best*, because it is the *greatest*. Or, This man is *learned*, because he hath *many books*. Or, that *Charles* hath *a grey beard*, because *he was not hanged ten yeares agoe*. Here the ordinary fault is, when the occasion is taken for a cause. For causes doe act, but occasions act not; but are onely the subject and matter of acting. Thus truth breeds hatred, not of it owne nature, but by occasion. So the Law of God hardeneth the hearts of wicked men that oppose themselues against it. It is not the cause of the hardnesse, but onely the occasion.

## The eight Chapter.

*Of the fallacie which mingleth many Interrogations, as if they were but one.*

SOmetimes many Interrogations are cunningly entermingled, that an

an vntruth may be crowded in amongst many truths. As, *Cyrus, Alexander, Cæsar were they not valiant Kings?* Or, *these qualities, to be bay, olde, tall, one-eyde, are they not in this horse?*

Some will be ready to grant all this, not marking that *Cæsar* was never King; and that to be one-eyde is a privation, and not a qualitie; and that to be olde is not a qualitie, but a quantitie or length of time past. Therefore such Interrogations must be answered by distinction.

## The ninth Chapter.

### *Of the fallacie which is committed by the Ignorance of that which contradicteth the Question.*

THe fallacie through the Ignorance of that which contradicteth, is, when he that argueth against me brings a conclusion which he alledgeth as contrary or contradictorie to my position, which notwithstanding is nothing prejudiciall vnto it, and

and may be granted. For example, if I say that *God is no lyar*; a Sophister will goe about to conclude, that God saith not all the truth: which notwithstanding agrees very well with that which I affirme; neither doth it from thence follow that God is a lyar.

To the end therefore that these be not taken for contradictorie or contrarie Enuntiations, which indeed are not: we must vnderstand that if we will make two Enuntiations to be cõtradictorie, the termes must be vnderstood in the same sense in both, and without equivocation. Therfore these two Enuntiations, *Every Cocke is living*, and, *Every Cocke is not living*, are not contradictorie: if the one be meant of a living creature, and the other taken for the cocke of a Gunne. 1.

Againe, the attribute must agree with the subject in the same part, & according to the same time. Therefore these two Enuntiations, *Man is mortall*; and, *Man is immortall*, are not contradictorie: if the one be vnderstood of the body; and the other of 2.

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the ſoule of man. And, *The Grecians were valiant*, contradicteth not this, *The Grecians were not valiant*, for both are true, if you conſider them at ſeverall times.

3. Againe, the attribute of the Enuntiation muſt not be vnderſtood in diuers reſpects. For *Cicero is of great ſtature*; and, *Cicero is not of great ſtature*, may both be true, if *Cicero* be compared to divers perſons: little in compariſon of a giant, and great in compariſon of a dwarfe.

## The tenth Chapter.

### *Of the faults in Syllogiſmes.*

GEnerally all Syllogiſmes may be faultie, either in the forme, or in the matter. They are faultie in the Forme, when the rules of the figures are not obſerved, committing a fault, either in the quantitie, or qualitie, or the propoſitions, or in the placing of the Meane, or if there be more then three termes.

The Syllogiſme is faultie in the Matter,

Matter, when one of the propoſitiõs, or both, are falſe, either in the whole, or in part. This faultineſſe happeneth ſometimes through ſimplicitie, and without cunning, but ſometimes it is fraudulent and with cunning; ſuch as are the fallacies aboue-mentioned. If a Syllogiſme be faulty in the forme, it muſt be brought to the true forme. If it be faultie in the matter, that propoſition which is falſe muſt be denied. And if it be doubtfull or true in part onely, it muſt be diſtinguiſhed.

But if the fault be neither in the forme, nor in the matter, but onely in the fallacie of the ignorance of that which contradicteth the queſtion, by the which the adverſary maintaineth a thing which doth not prejudice the queſtion; in ſuch a caſe wee muſt grant all that the adverſary ſaith, and ſhew him, that in thinking to contradict vs, he doth it not.

The end and ſcope of theſe fallacies, is not to teach vs how to deceiue, but how to avoide deceipt.

*FINIS.*